

PART 70 OPERATING PERMIT OFFICE OF AIR MANAGEMENT

**Caterpillar, Inc.
3701 State Road 26 East
Lafayette, Indiana 47905**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T 157-7594-00044	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management	Issuance Date:

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary internal combustion engine manufacturing source.

Responsible Official: Warren Ewalt
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
SIC Code: 3519
County Location: Tippecanoe
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Major Source, under PSD Rules
Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (a) Three (3) boilers, identified as BY24010, BY24011, and BY24012, constructed in 1979, fired by natural gas or no. 2 fuel oil, with a maximum capacity of 83.3 million British thermal units per hour, each, exhausting to stack B-1.
- (b) Twenty (20) 3500 engine test cells, identified as M501 through M520, constructed in 1979, with a maximum heat input capacity of 7.6 million British thermal units per hour, each, when operating on diesel fuel and 6.1 million British thermal units per hour, each, when operating on natural gas, exhausting at stack vents W-4 (A through T).
- (c) One (1) 3600 engine test cell, identified as M522, constructed in 1979, with a maximum heat input capacity of 7.6 million British thermal units per hour when operating on diesel fuel and 6.1 million British thermal units per hour when operating on natural gas, exhausting at stack vents W-8 (A and B).
- (d) One (1) packaging test cell, identified as M525, constructed in September 1988, with a maximum heat input capacity of 20.3 million British thermal units per hour when operating on diesel fuel and 13.7 million British thermal units per hour when operating on natural gas, exhausting at stack vents W-9 (A through D).
- (e) One (1) power module for parallel testing, identified as M547, constructed in October 1991, with a maximum heat input capacity of 16.9 million British thermal units per hour when operating on diesel fuel and 16.9 million British thermal units per hour when operating on natural gas, exhausting at stack vent W-10.

- (f) One (1) dual fuel 3600 test stand, identified as M523, constructed in March 1994, with a maximum heat input capacity of 15.3 million British thermal units per hour when operating on diesel fuel and 11.0 million British thermal units per hour when operating on natural gas, exhausting at stack vents W-11 (A and B).
- (g) Three (3) peak shaving diesel generators, identified as EL45016, constructed in January 1995, with a maximum heat input capacity of 32.2 million British thermal units per hour, exhausting at stack vents W-13 and W-14.
- (h) One (1) sound attenuation test stand, identified as M528, constructed in February 1996, with a maximum heat input capacity of 17.0 million British thermal units per hour when operating on diesel fuel and 17.0 million British thermal units per hour when operating on natural gas, exhausting at stack vent W-12A.
- (i) One (1) product paint booth, identified as M751, constructed in 1979, equipped with electrostatic airless spray guns and dry filters for overspray controls, exiting at stack W-1, capacity: 15 engines per hour.
- (j) One (1) touch-up spray paint booth, identified as M775, constructed in 1979, equipped with electrostatic airless spray guns and dry filters for overspray controls, exiting at stack W-2.
- (k) One (1) product paint booth, identified as W-3, constructed in 1979, which will be taken out of service in 1999 when the new product paint booth, also identified as W-3, is installed, equipped with electrostatic airless spray guns and dry filters and a water wash system for overspray controls, capacity: 1.25 to 5.0 engines per hour.
- (l) One (1) product paint booth, identified as W-3, to be constructed in 1999, equipped with electrostatic airless spray guns and dry filters and a water wash system for overspray controls, capacity: 5 engines per hour.
- (m) One (1) product paint booth, identified as W-33, to be constructed in 1999, equipped with electrostatic airless spray guns and dry filters for overspray controls, capacity: 5 engines per hour.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]
[326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches soldering equipment, welding equipment.
- (b) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.
- (c) Other activities or categories with emissions equal to or less than the insignificant activity thresholds:

- (1) One (1) diesel fuel tank, capacity: 150,000 gallons.
- (2) One (1) No. 2 heating fuel oil tank, capacity: 400,000 gallons.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B

GENERAL CONDITIONS

B.1 Permit No Defense [326 IAC 2-1-10] [IC 13]

- (a) Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7.
- (b) This prohibition shall not apply to alleged violations of applicable requirements for which the Commissioner has granted a permit shield in accordance with 326 IAC 2-1-3.2 or 326 IAC 2-7-15, as set out in this permit in the Section B condition entitled "Permit Shield."

B.2 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Permit Term [326 IAC 2-7-5(2)]

This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3.

B.4 Enforceability [326 IAC 2-7-7(a)]

- (a) All terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM.
- (b) Unless otherwise stated, terms and conditions of this permit, including any provisions to limit the source's potential to emit, are enforceable by the United States Environmental Protection Agency (U.S. EPA) and citizens under the Clean Air Act.

B.5 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.6 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)]

- (a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall furnish to IDEM, OAM, within a reasonable time, any information that IDEM, OAM, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.
- (c) Upon request, the Permittee shall also furnish to IDEM, OAM, copies of records required to be kept by this permit. If the Permittee wishes to assert a claim of confidentiality over any of the furnished records, the Permittee must furnish such records to IDEM, OAM, along with a claim of confidentiality under 326 IAC 17. If requested by IDEM, OAM, or the U.S. EPA, to furnish copies of requested records directly to U. S. EPA, and if the Permittee is making a claim of confidentiality regarding the furnished records, then the Permittee must furnish such confidential records directly to the U.S. EPA along with a claim of confidentiality under 40 CFR 2, Subpart B.

B.9 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit constitutes a violation of the Clean Air Act and is grounds for:
 - (1) Enforcement action;
 - (2) Permit termination, revocation and reissuance, or modification; or
 - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B.10 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)]

- (a) Any application form, report, or compliance certification submitted under this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification required under this permit, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

B.11 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was based on continuous or intermittent data;
 - (4) The methods used for determining compliance of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3);
 - (5) Any insignificant activity that has been added without a permit revision; and
 - (6) Such other facts, as specified in Sections D of this permit, as IDEM, OAM, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.12 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]
[326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this permit, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM.

B.13 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAM, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Management, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted notice, either in writing or facsimile, of the emergency to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAM, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAM, by telephone or facsimile of an emergency lasting more than one (1) hour in compliance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.14 Permit Shield [326 IAC 2-7-15]

-
- (a) This condition provides a permit shield as addressed in 326 IAC 2-7-15.

- (b) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. Compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that:
 - (1) The applicable requirements are included and specifically identified in this permit; or
 - (2) The permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable.
- (c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAM, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application.
- (e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
 - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
 - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAM, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAM, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.15 Multiple Exceedances [326 IAC 2-7-5(1)(E)]

Any exceedance of a permit limitation or condition contained in this permit, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this permit.

B.16 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within ten (10) calendar days from the date of the discovery of the deviation.

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

- (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
- (2) An emergency as defined in 326 IAC 2-7-1(12); or
- (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
- (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

- (c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

**B.17 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]**

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)]
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAM, determines any of the following:

- (1) That this permit contains a material mistake.
- (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
- (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAM, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAM, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAM, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.18 Permit Renewal [326 IAC 2-7-4]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAM, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]
 - (1) A timely renewal application is one that is:
 - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due. [326 IAC 2-5-3]
 - (2) If IDEM, OAM, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

- (c) Right to Operate After Application for Renewal [326 IAC 2-7-3]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAM, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAM, any additional information identified as being needed to process the application.
- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]
If IDEM, OAM, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.19 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.20 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.21 Changes Under Section 502(b)(10) of the Clean Air Act [326 IAC 2-7-20(b)]

The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a) and the following additional conditions:

- (a) For each such change, the required written notification shall include a brief description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.
- (b) The permit shield, described in 326 IAC 2-7-15, shall not apply to any change made under 326 IAC 2-7-20(b).

B.22 Operational Flexibility [326 IAC 2-7-20]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any approval required by 326 IAC 2-1 has been obtained;
 - (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and
 - (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20 (b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAM, in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).
- (b) For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAM, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.23 Construction Permit Requirement [326 IAC 2]

Except as allowed by Indiana P.L. 130-1996 Section 12, as amended by P.L. 244-1997, modification, construction, or reconstruction shall be approved as required by and in accordance with 326 IAC 2.

B.24 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements. [326 IAC 2-7-6(6)]

- (1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAM, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source. In the event that a claim of confidentiality is so asserted, neither IDEM, OAM, nor an authorized representative, may disclose the information unless and until IDEM, OAM, makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]
- (2) The Permittee, and IDEM, OAM, acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]

B.25 Transfer of Ownership or Operation [326 IAC 2-1-6] [326 IAC 2-7-11]

Pursuant to 326 IAC 2-1-6 and 326 IAC 2-7-11:

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, within thirty (30) days of the change. Notification shall include a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the Permittee and the new owner.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an administrative amendment pursuant to 326 IAC 2-7-11. The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) IDEM, OAM, shall reserve the right to issue a new permit.

B.26 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]

- (a) The Permittee shall pay annual fees to IDEM, OAM, within thirty (30) calendar days of receipt of a billing. If the Permittee does not receive a bill from IDEM, OAM the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAM, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- C.1 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]
Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- C.2 Opacity [326 IAC 5-1]
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:
- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]
The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.
- C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]
The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.
- C.5 Fugitive Dust Emissions [326 IAC 6-4]
The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.
- C.6 Operation of Equipment [326 IAC 2-7-6(6)]
All air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.
- C.7 Stack Height [326 IAC 1-7]
The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) Procedures for Asbestos Emission Control
The Permittee shall comply with the emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are mandatory for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.9 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Schedule [326 IAC 2-7-6(3)]

The Permittee:

- (a) Has certified that all facilities at this source are in compliance with all applicable requirements; and
- (b) Has submitted a statement that the Permittee will continue to comply with such requirements; and
- (c) Will comply with such applicable requirements that become effective during the term of this permit.

C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend compliance schedule an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.12 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.13 Monitoring Methods [326 IAC 3]

Any monitoring or testing performed to meet the applicable requirements of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on December 12, 1996.
- (b) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (c) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (d) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (e) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present in a process in more than the threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall:

- (a) Submit:
 - (1) A compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a); or
 - (2) As a part of the compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and
 - (3) A verification to IDEM, OAM, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.
- (b) Provide annual certification to IDEM, OAM, that the Risk Management Plan is being properly implemented.

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.16 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]
[326 IAC 1-6]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
 - (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;
 - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:
 - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
- (1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
 - (2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:
- Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

C.19 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.21 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported.
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period.
- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports.
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Stratospheric Ozone Protection

C.22 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (a) Three (3) boilers, identified as BY24010, BY24011, and BY24012, constructed in 1979, fired by natural gas or no. 2 fuel oil, with a maximum capacity of 83.3 million British thermal units per hour, each, exhausting to stack B-1.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 PSD Minor Limit and Sulfur Dioxide Emission Limitations [326 IAC 2-2] [40 CFR 52.21] [326 IAC 7-1]

- (a) Pursuant to PC (79) 1414, issued July 25, 1979, the sulfur content of the fuel oil shall not exceed 0.29% unless the actual steam rate is such that the combination of steam rate and a higher sulfur content will result in an annual SO₂ emissions of less than 246 tons of sulfur dioxide per twelve (12) consecutive months. This will satisfy the requirements of 326 IAC 7-1.1-2, Sulfur Dioxide Emission Limitations.
- (b) Pursuant to OP 79-04-91-0408, OP 79-04-91-0409, and OP 79-04-91-0410, issued on October 27, 1987, the maximum combined flow rate of steam from the three (3) boilers shall not exceed 140,000 pounds per hour.

Compliance with these limits makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.1.2 Particulate Matter (PM) [326 IAC 6-2-3]

Pursuant to CP 73-04-91-0408 issued October 27, 1987, the three (3) boilers, identified as BY24010, BY24011, and BY24012, constructed in 1979, with maximum capacities of 83.3 million British thermal units per hour, shall be limited to PM emissions of 0.6 pound per million British thermal units of heat input.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the SO₂ and PM limits specified in Condition D.1.1(a) and D.1.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.5 Sulfur Dioxide (SO₂)

Compliance with the steam flow rate limitations contained in Condition D.1.1 shall be determined by a turbine meter in the common header of the three (3) boilers. The total steam load in flow rate per hour, total flow per 24 hour period, and total annual flow will be determined by computer and recorded.

D.1.6 Sulfur Dioxide (SO₂) Emissions and Sulfur Content

Compliance with Condition D.1.1 shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed the limits contained in Condition D.1.1 by:
 - (1) Providing vendor analysis of fuel delivered, if accompanied by a certification;
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the three (3) 83.3 MMBtu per hour boilers, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.7 Visible Emissions Notations

- (a) Daily visible emission notations of the boiler stack (B-1) exhaust shall be performed during normal daylight operations when burning no. 2 fuel oil and exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.8 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (6) below.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;
- (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications;
- (5) The name of the fuel supplier; and
- (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

- (b) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (3) below.
 - (1) The total steam load in flow rate per hour.
 - (2) The total steam load in total flow per 24 hour period.
 - (3) Total annual flow.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.9 Reporting Requirements

- (a) The natural gas fired boiler certification, shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported.
- (b) A quarterly summary of the information to document compliance with Condition D.1.1 (a) shall be submitted to the address(es) listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (b) Twenty (20) 3500 engine test cells, identified as M501 through M520, constructed in 1979, with a maximum heat input capacity of 7.6 million British thermal units per hour, each, when operating on diesel fuel and 6.1 million British thermal units per hour, each, when operating on natural gas, exhausting at stack vents W-4 (A through T).
- (c) One (1) 3600 engine test cell, identified as M522, constructed in 1979, with a maximum heat input capacity of 7.6 million British thermal units per hour when operating on diesel fuel and 6.1 million British thermal units per hour when operating on natural gas, exhausting at stack vents W-8 (A and B).

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The input of diesel fuel to the twenty-one (21) engine test cells shall be limited to 1,062 kilogallons per twelve (12) consecutive months. For the purposes of this NO_x limit, one (1) million cubic feet natural gas usage by the twenty (20) engine test cells (M501-M520) is equivalent to 6.81 kilogallons of diesel fuel at the test cells, and one (1) million cubic feet of natural gas usage at the one (1) engine test cell (M522) is equivalent to 0.640 kilogallons of diesel fuel at the test cells. This usage limit is required to limit the potential to emit of NO_x to less than 250 tons per year. As a result of this limit, CO and VOC emissions will be limited to less than 250 tons per year. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.2.2 Sulfur Dioxide (SO_2) Limitations [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1 (SO_2 Emissions Limitations) the SO_2 emissions from the twenty-one (21) engine test cells shall not exceed five tenths (0.5) pound per million British thermal unit heat input.

Compliance Determination Requirements

D.2.3 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the NO_x , CO, and VOC limits specified in Condition D.2.1 and the SO_2 limit specified in Condition D.2.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.4 Sulfur Dioxide (SO_2) Emissions and Sulfur Content

Compliance shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed the limits contained in Condition D.2.1 by:
 - (1) Providing vendor analysis of fuel delivered, if accompanied by a certification;
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

- (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
- (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the twenty-one (21) engine test cells, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.
- (c) Compliance may also be determined by a certification that all purchased fuels are motor vehicle highway fuels.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.5 Record Keeping Requirements

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- (a) To document compliance with Condition D.2.2, the Permittee shall maintain records in accordance with (1) through (6) below.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;
- (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications;
- (5) The name of the fuel supplier; and
- (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

- (b) To document compliance with Condition D.2.1, the Permittee shall maintain monthly records of the amount of diesel fuel used at the twenty-one (21) engine test cells, the natural gas usage at the twenty (20) engine test cells (M501-M520), and the natural gas usage at the one (1) engine test cell (M522).

- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.6 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted to the address(es) listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (d) One (1) packaging test cell, identified as M525, constructed in September 1988, with a maximum heat input capacity of 20.3 million British thermal units per hour when operating on diesel fuel and 13.7 million British thermal units per hour when operating on natural gas, exhausting at stack vents W-9 (A through D).

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The input of diesel fuel to the one (1) packaging test cell shall be limited to 166 kilogallons per twelve (12) consecutive months. For the purposes of this NO_x limit, one (1) million cubic feet of natural gas usage shall be equivalent to 0.640 kilogallons of diesel fuel usage. This usage limit is required to limit the potential to emit of NO_x to less than 40 tons per year. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

Compliance Determination Requirements

D.3.2 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the NO_x limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.3 Record Keeping Requirements

- (a) To document compliance with Condition D.3.1, the Permittee shall maintain monthly records of the amount of diesel fuel and natural gas used at the one (1) packaging test cell.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.1 shall be submitted to the address(es) listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.4

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (e) One (1) power module for parallel testing, identified as M547, constructed in October 1991, with a maximum heat input capacity of 16.9 million British thermal units per hour when operating on diesel fuel and 16.9 million British thermal units per hour when operating on natural gas, exhausting at stack vent W-10.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The input of diesel fuel to the one (1) power module shall be limited to 166 kilogallons per twelve (12) consecutive months. For the purposes of this NO_x limit, one (1) million cubic feet of natural gas usage shall be equivalent to 1.14 kilogallons of diesel fuel usage. This usage limit is required to limit the potential to emit of NO_x to less than 40 tons per year. As a result of this limit PM₁₀ emissions are limited to less than 15 tons per year. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.4.2 Volatile Organic Compound (VOC) Limit

The input of natural gas to the one (1) power module shall be limited to 76.1 million cubic feet per twelve (12) consecutive months. For the purposes of this VOC limit, one (1) kilogallon of diesel fuel usage shall be equivalent to 0.051 million cubic feet of natural gas usage. This usage limit is required to limit the potential to emit of VOC to less than 25 tons per year. Compliance with this limit makes 326 IAC 8-1-6 (New facilities; General reduction requirements) not applicable.

D.4.3 Sulfur Dioxide (SO₂) Limitations [326 IAC 7-1.1-2]

Pursuant to CP 157-4037, issued December 16, 1994, the SO₂ emissions from the one (1) power module for parallel testing shall not exceed five tenths (0.5) pounds per million British thermal unit heat input.

Compliance Determination Requirements

D.4.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the NO_x and PM₁₀ limits specified in Condition D.4.1, the VOC limit specified in Condition D.4.2, and the SO₂ limit specified in Condition D.4.3 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.4.5 Sulfur Dioxide (SO₂) Emissions and Sulfur Content

Compliance with Condition D.4.3 shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed the limits contained in Condition D.4.3 by:
- (1) Providing vendor analysis of fuel delivered, if accompanied by a certification;
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

- (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
- (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the one (1) power module, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.
- (c) Compliance may also be determined by a certification that all purchased fuels are motor vehicle highway fuels.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.6 Record Keeping Requirements

-
- (a) To document compliance with Condition D.4.3, the Permittee shall maintain records in accordance with (1) through (6) below.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;
- (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications;
- (5) The name of the fuel supplier; and
- (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

- (b) To document compliance with Conditions D.4.1 and D.4.2, the Permittee shall maintain monthly records of the amount of diesel fuel and natural gas used at the one (1) power module.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.7 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.4.1 and D.4.2 shall be submitted to the address(es) listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (f) One (1) dual fuel 3600 test stand, identified as M523, constructed in March 1994, with a maximum heat input capacity of 15.3 million British thermal units per hour when operating on diesel fuel and 11.0 million British thermal units per hour when operating on natural gas, exhausting at stack vents W-11 (A and B).

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The input of diesel fuel to the one (1) dual fuel 3600 test stand shall be limited to 166 kilogallons per twelve (12) consecutive months. For the purposes of this NO_x limit, one (1) million cubic feet of natural gas usage shall be equivalent to 0.640 kilogallons of diesel fuel usage. This usage limit is required to limit the potential to emit of NO_x to less than 40 tons per year. As a result of this limit, PM₁₀ emissions are limited to less than 15 tons per year. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

Compliance Determination Requirements

D.5.2 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the NO_x and PM₁₀ limits specified in Condition D.5.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.3 Record Keeping Requirements

- (a) To document compliance with Condition D.5.1, the Permittee shall maintain monthly records of the amount of diesel fuel and natural gas used at the one (1) dual fuel 3600 test stand.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.5.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.5.1 shall be submitted to the address(es) listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.6

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (g) Three (3) peak shaving diesel generators, identified as EL45016, constructed in January 1995, with a maximum heat input capacity of 32.2 million British thermal units per hour, exhausting at stack vents W-13 and W-14.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The input of diesel fuel to the three (3) peak shaving diesel generators shall be limited to 166 kilogallons per twelve (12) consecutive months. This usage limit is required to limit the potential to emit of NO_x to less than 40 tons per year. As a result of this limit, CO emissions are limited to less than 100 tons per year, PM emissions are limited to less than 25 tons per year, and PM₁₀ emissions are limited to less than 15 tons per year. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.6.2 Sulfur Dioxide (SO₂) Limitations [326 IAC 7-1.1-2]

Pursuant to CP 157-4123, issued January 9, 1995, the SO₂ emissions from the three (3) peak shaving diesel generators shall not exceed five tenths (0.5) pound per million British thermal unit heat input.

D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility.

Compliance Determination Requirements

D.6.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the NO_x, CO, and PM₁₀ limits specified in Condition D.6.1 and the SO₂ limit specified in Condition D.6.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.6.5 Sulfur Dioxide (SO₂) Emissions and Sulfur Content

Compliance with Condition D.6.2 shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed the limits contained in Condition D.6.2 by:
- (1) Providing vendor analysis of fuel delivered, if accompanied by a certification;
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
- (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

- (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the one (1) peak shaving diesel generator, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.6 Record Keeping Requirements

- (a) To document compliance with Condition D.6.2, the Permittee shall maintain records in accordance with (1) through (6) below.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;
 - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and
- If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:
- (4) Fuel supplier certifications;
 - (5) The name of the fuel supplier; and
 - (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

- (b) To document compliance with Condition D.6.1, the Permittee shall maintain monthly records of the amount of diesel fuel used at the three (3) peak shaving diesel generators.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.7 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.6.1 shall be submitted to the address(es) listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.7

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (h) One (1) sound attenuation test stand, identified as M528, constructed in February 1996, with a maximum heat input capacity of 17.0 million British thermal units per hour when operating on diesel fuel and 17.0 million British thermal units per hour when operating on natural gas, exhausting at stack vent W-12A.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The input of diesel fuel to the one (1) sound attenuation test stand shall be limited to 166 kilogallons per twelve (12) consecutive months. For the purposes of this NO_x limit, one (1) million cubic feet of natural gas usage shall be equivalent to 5.97 kilogallons of diesel fuel usage. This usage limit is required to limit the potential to emit of NO_x to less than 40 tons per year. As a result of this limit, PM₁₀ emissions are limited to less than 15 tons per year. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

Compliance Determination Requirements

D.7.2 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the NO_x and This usage limit is required to limit the potential to emit of NO_x to less than 40 tons per year and PM₁₀ limits specified in Condition D.7.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.7.3 Record Keeping Requirements

- (a) To document compliance with Condition D.7.1, the Permittee shall maintain monthly records of the amount of diesel fuel and natural gas used at the one (1) sound attenuation test stand.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.7.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.7.1 shall be submitted to the address(es) listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.8

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (i) One (1) product paint booth, identified as M751, constructed in 1979, equipped with electrostatic airless spray guns and dry filters for overspray controls, exiting at stack W-1, capacity: 15 engines per hour.
- (j) One (1) touch-up spray paint booth, identified as M775, constructed in 1979, equipped with electrostatic airless spray guns and dry filters for overspray controls, exiting at stack W-2.
- (k) One (1) product paint booth, identified as W-3, constructed in 1979, which will be taken out of service in 1999 when the new product paint booth, also identified as W-3, is installed, equipped with electrostatic airless spray guns and dry filters and a water wash system for overspray controls, capacity: 1.25 to 5.0 engines per hour.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

The PM from the two (2) existing product paint booths (M751 and W-3) and one (1) touch-up paint booth (M775) shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.8.2 Volatile Organic Compound (VOC) [326 IAC 8-2-9]

Pursuant to the amendment to OP 79-04-91-0411, issued October 7, 1992, the volume weighted average volatile organic compound (VOC) content of coating applied to the engines shall be limited to 3.5 pounds of VOCs per gallon of coating less water, as delivered to the applicator for any calendar day, for air dried or forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.8.3 Volatile Organic Compounds (VOC) [326 IAC 2-2]

Any change or modification to these existing facilities which may increase the potential to emit VOC to 250 tons per year, or more, shall cause the facilities to be subject to 326 IAC 2-2, Prevention of Significant Deterioration (PSD) and shall require prior IDEM, OAM, approval.

D.8.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.8.5 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.8.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.8.6 Volatile Organic Compounds

Compliance with the VOC content limitation contained in Condition D.8.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) using formulation data supplied by the coating manufacturer. However, IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.8.7 Particulate Matter (PM)

The dry filters and water wash system for overspray control shall be in operation at all times when the two (2) existing product paint booths (M751 and W-3) and one (1) touch-up paint booth (M775) are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.8.8 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters and water wash system. To monitor the performance of the dry filters and water wash system, weekly observations shall be made of the overspray from the paint booth stack(s) while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.8.9 Record Keeping Requirements

- (a) To document compliance with Condition D.8.2, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.8.2.

- (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2) A log of the dates in which each coating is disbursed to the paint booths and a log of dates of use for each coating with a VOC content greater than 3.5 pounds per gallon;
 - (3) The volume weighted VOC content of the coatings used for each day on days when a coating with a VOC content greater than 3.5 pounds per gallon is used.
- (b) To document compliance with Conditions D.8.1 and D.8.7, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.9

FACILITY CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (l) One (1) product paint booth, identified as W-3, to be constructed in 1999, equipped with electrostatic airless spray guns and dry filters and a water wash system for overspray controls, capacity: 5 engines per hour.
- (m) One (1) product paint booth, identified as W-33, to be constructed in 1999, equipped with electrostatic airless spray guns and dry filters for overspray controls, capacity: 5 engines per hour.

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

Construction Conditions [326 IAC 2-1-3.2]

General Construction Conditions

- D.9.1 Pursuant to CP 157-8897-00044, issued December 12, 1997, this permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
- D.9.2 Pursuant to 326 IAC 2-1-9(b) (Revocation of Permits), IDEM, OAM, may revoke this section of the approved permit if construction is not commenced within eighteen (18) months after receipt of this permit or if construction is suspended for a continuous period of one (1) year or more.
- D.9.3 Pursuant to CP 157-8897-00044, issued December 12, 1997, all requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

D.9.4 Pursuant to CP 157-8897-00044, issued December 12, 1997, this document shall also become the first-time operation permit for the facilities under this section of this permit, pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

- (a) The affidavit of construction attached to CP 157-8897-00044, issued December 12, 1997, shall be submitted to:

Indiana Department of Environmental Management
Permit Administration & Development Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

verifying that the facilities were constructed as proposed in the application. The facilities covered in this section of this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this permit.

Operation Conditions

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.5 Particulate Matter (PM) [326 IAC 6-3-2(c)]

The PM from the two (2) product paint booths (W-3 and W-33) shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.9.6 New Source Toxics Control [326 IAC 2-1-3.4]

Pursuant to 326 IAC 2-1-3.4 (New Source Toxics Control), the new product paint booths (W-3 and W-33) are subject to the requirements of 326 IAC 2-1-3.4, which requires that the maximum achievable control technology (MACT) be used to control hazardous air pollutant (HAP) emissions. MACT for these facilities shall be satisfied by the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) specified in Condition D.9.7.

D.9.7 Volatile Organic Compound (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volume weighted average volatile organic compound (VOC) content of coating applied to the internal combustion engines shall be limited to 3.5 pounds of VOCs per gallon of coating less water, as delivered to the applicator for any calendar day, for air dried or forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.9.8 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

- (a) Pursuant to CP 157-8897-00044, issued on December 12, 1997, this facility shall use no more than 70.7 tons of VOC, including coatings, dilution solvents, and cleaning solvents, per 12 consecutive month period. This usage limit is required to limit the potential to emit of VOC to less than 70.7 tons per twelve (12) consecutive month period. This will result in a maximum net increase in VOC emissions of less than 40 tons per year from this modification. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.
- (b) During the first twelve (12) months of operation, the input of VOC shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 70.7 total tons per year divided by twelve (12) months, which equals 5.89 tons per month, rolled on a monthly basis.

D.9.9 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.9.10 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.9.5 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.9.11 Volatile Organic Compounds

Compliance with the VOC content and usage limitations contained in Conditions D.9.7 and D.9.8 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.9.12 VOC Emissions

Compliance with Condition D.9.8 shall be demonstrated at the end of each month based on the total volatile organic compound usage for the most recent twelve (12) month period.

D.9.13 Particulate Matter (PM)

The dry filters and water wash system for overspray control shall be in operation at all times when the two (2) product paint booths (W-3 and W-33) are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.9.14 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters and water wash system. To monitor the performance of the dry filters and water wash system, weekly observations shall be made of the overspray from the paint booth stack(s) while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.9.15 Record Keeping Requirements

- (a) To document compliance with Conditions D.9.6, D.9.7 and D.9.8, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken daily or monthly, as specified, and shall be complete and sufficient to establish compliance with the VOC usage limits and the VOC emission limits established in Conditions D.9.6 and D.9.7.
 - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2) A log of the dates in which each coating is disbursed to the paint booths and a log of dates of use for each coating with a VOC content greater than 3.5 pounds per gallon;
 - (3) The volume weighted VOC content of the coatings used for each day on days when a coating with a VOC content greater than 3.5 pounds per gallon is used;
 - (4) The cleanup solvent usage for each month;
 - (5) The total VOC usage for each month; and
 - (6) The weight of VOCs emitted for each compliance period.

- (b) To document compliance with Condition D.9.5 and D.9.13, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.9.16 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.9.8 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.10

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] - Insignificant Activities

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPS: brazing equipment, cutting torches soldering equipment, welding equipment.
- (b) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.
- (c) Other activities or categories with emissions equal to or less than the insignificant activity thresholds:
 - (1) One (1) diesel fuel tank, capacity: 150,000 gallons.
 - (2) One (1) No. 2 heating fuel oil tank, capacity: 400,000 gallons.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.10.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the insignificant activities of brazing, cutting, soldering, and welding and the grinding and machining operations shall not exceed allowable PM emission rate based on the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour.

D.10.2 Performance Standards for Volatile Organic Storage Tanks [40 CFR Part 60, Subpart Ka]

The diesel fuel tank with a capacity of 150,000 gallons and the no. 2 fuel oil tank with a capacity of 400,000 gallons are subject to the requirements of 40 CFR Part 60, Subpart Ka. Should the true vapor pressure of the petroleum liquid stored in either tank at any time exceed 1.0 psia, the owner or operator of the tanks shall comply with the record keeping requirements of 40 CFR Part 60.114a. Should, at any time, the true vapor pressure of the liquid stored exceed 1.5 psia, the tanks will become subject to the requirements of 40 CFR Parts 60.112a and 60.113a. A copy of this rule is attached.

Compliance Determination Requirement

D.10.3 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.10.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967**

**PART 70 OPERATING PERMIT
EMERGENCY/DEVIATION OCCURRENCE REPORT**

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044

This form consists of 2 pages

Page 1 of 2

Check either No. 1 or No.2	
9	1. This is an emergency as defined in 326 IAC 2-7-1(12) <input type="checkbox"/> The Permittee must notify the Office of Air Management (OAM), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and <input type="checkbox"/> The Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16
9	2. This is a deviation, reportable per 326 IAC 2-7-5(3)(c) <input type="checkbox"/> The Permittee must submit notice in writing within ten (10) calendar days

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency/Deviation:
Describe the cause of the Emergency/Deviation:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency/Deviation started:
Date/Time Emergency/Deviation was corrected:
Was the facility being properly operated at the time of the emergency/deviation? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency/deviation:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT
NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044

**This certification shall be included when submitting monitoring, testing reports/results
or other documents as required by this permit.**

Report period

Beginning: _____

Ending: _____

Boiler Affected

Alternate Fuel

Days burning alternate fuel

From

To

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

Caterpillar, Inc.
Lafayette, Indiana
Permit Reviewer: MES

Page 55 of 64
OP No. T157-7594-00044

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044
Facility: Three (3) boilers - Section D.1
Parameter: SO₂ emissions
Limit: No more than 246 tons per twelve (12) consecutive months

YEAR: _____

Month	This Month	Previous 11 Months	12-Month Total
	SO ₂ emissions (tons)	SO ₂ emissions (tons)	SO ₂ emissions (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044
Facility: Twenty-one (21) engine test cells - Section D.2
Parameter: NO_x; fuel usage
Limit: 1,062 kilogallons of diesel fuel per twelve (12) consecutive months.
One (1) mmcf natural gas usage at the twenty (20) engine test cells (M501-M520) is equivalent to 6.81 kilogallons of diesel fuel, and
One (1) mmcf of natural gas usage at the one (1) engine test cell (M522) is equivalent to 0.640 kilogallons of diesel fuel
NO_x, CO and VOC emissions to less than 250 tons per year
YEAR: _____

Month	This Month					Previous 11 Months	12-Month Total
	Natural Gas usage (M501-M520) (mmcf)	Diesel Equivalent (6.81 x natural gas usage at M501-M520) (kgal)	Natural gas usage (M522) (mmcf)	Diesel Equivalent (0.640 x natural gas usage at M522) (kgal)	Diesel fuel usage (kgal)	Diesel fuel used + diesel equivalent of natural gas used (kgal)	Diesel fuel used + diesel equivalent of natural gas used (kgal)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044
Facility: One (1) packaging test cell - Section D.3
Parameter: NO_x; fuel usage
Limit: 166 kilogallons of diesel fuel per twelve (12) consecutive months.
One (1) million cubic feet of natural gas usage is equivalent to 0.640 kilogallons of diesel fuel usage.
NO_x emissions to less than 40 tons per year

YEAR: _____

Month	This Month			Previous 11 Months	12-Month Total
	Natural gas usage (mmcf)	Diesel equivalent (0.640 x natural gas usage) (kgal)	Diesel fuel usage (kgal)	Diesel fuel used + diesel equivalent of natural gas used (kgal)	Diesel fuel used + diesel equivalent of natural gas used (kgal)

- 9 No deviation occurred in this quarter.
9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044
Facility: One (1) power module - Section D.4
Parameter: NO_x; fuel usage
Limit: 166 kilogallons of diesel fuel per twelve (12) consecutive months.
One (1) million cubic feet of natural gas usage is equivalent to 1.14 kilogallons of diesel fuel usage.
NO_x emissions to less than 40 tons per year and PM₁₀ emissions to less than 15 tons per year

YEAR: _____

Month	This Month			Previous 11 Months	12-Month Total
	Natural gas usage (mmcf)	Diesel equivalent (1.14 x natural gas usage) (kgal)	Diesel fuel usage (kgal)	Diesel fuel used + diesel equivalent of natural gas used (kgal)	Diesel fuel used + diesel equivalent of natural gas used (kgal)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044
Facility: One (1) power module - Section D.4
Parameter: VOC; fuel usage
Limit: 76.1 million cubic feet of natural gas per twelve (12) consecutive months. One (1) kilogallon of diesel fuel usage shall be equivalent to 0.051 million cubic feet of natural gas usage
VOC emissions to less than 25 tons per year

YEAR: _____

Month	This Month			Previous 11 Months	12-Month Total
	Diesel fuel usage (kgal)	Natural gas equivalent (0.051 x natural gas usage) (mmcf)	Natural gas usage (mmcf)	Natural gas used + natural gas equivalent of diesel fuel used (mmcf)	Natural gas used + natural gas equivalent of diesel fuel used (mmcf)

- 9 No deviation occurred in this quarter.
9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044
Facility: One (1) dual fuel 3600 test stand - Section D.5
Parameter: NO_x; fuel usage
Limit: 166 kilogallons of diesel fuel per twelve (12) consecutive months.
One (1) million cubic feet of natural gas usage is equivalent to 0.640 kilogallons of diesel fuel usage.
NO_x emissions to less than 40 tons per year and PM₁₀ emissions to less than 15 tons per year

YEAR: _____

Month	This Month			Previous 11 Months	12-Month Total
	Natural gas usage (mmcf)	Diesel equivalent (0.640 x natural gas usage) (kgal)	Diesel fuel usage (kgal)	Diesel fuel used + diesel equivalent of natural gas used (kgal)	Diesel fuel used + diesel equivalent of natural gas used (kgal)

- 9 No deviation occurred in this quarter.
9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044
Facility: Three (3) peak shaving diesel generators - Section D.6
Parameter: NO_x; fuel usage
Limit: 166 kilogallons of diesel fuel per twelve (12) consecutive months.
NO_x emissions to less than 40 tons per year, CO emissions to less than 100 tons per year, PM emissions to less than 25 tons per year, and PM₁₀ emissions to less than 15 tons per year

YEAR: _____

Month	This Month	Previous 11 Months	12-Month Total
	Diesel fuel usage (kgal)	Diesel fuel usage (kgal)	Diesel fuel usage (kgal)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044
Facility: One (1) sound attenuation test stand - Section D.7
Parameter: NO_x; fuel usage
Limit: 166 kilogallons of diesel fuel per twelve (12) consecutive months.
One (1) million cubic feet of natural gas usage is equivalent to 5.97 kilogallons of diesel fuel usage.
NO_x emissions to less than 40 tons per year and PM₁₀ emissions to less than 15 tons per year

YEAR: _____

Month	This Month			Previous 11 Months	12-Month Total
	Natural gas usage (mmcf)	Diesel equivalent (5.97 x natural gas usage) (kgal)	Diesel fuel usage (kgal)	Diesel fuel used + diesel equivalent of natural gas used (kgal)	Diesel fuel used + diesel equivalent of natural gas used (kgal)

- 9 No deviation occurred in this quarter.
9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044
Facility: Two (2) product paint booths (W-3 and W-33), constructed in 1999 - Section D.9
Parameter: VOC usage
Limit: 70.7 tons per twelve (12) consecutive months.
VOC emissions to less than 70.7 tons per year

YEAR: _____

Month	This Month	Previous 11 Months	12-Month Total
	VOC usage (tons)	VOC usage (tons)	VOC usage (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT
QUARTERLY COMPLIANCE MONITORING REPORT**

Source Name: Caterpillar, Inc.
Source Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Mailing Address: 3701 State Road 26 East, Lafayette, Indiana 47905
Part 70 Permit No.: T 157-7594-00044

Months: _____ **to** _____ **Year:** _____

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (e.g. Permit Condition D.1.3)	Number of Deviations	Date of Each Deviation

Form Completed By: _____
Title/Position: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Part 70 Operating Permit

Source Background and Description

Source Name: Caterpillar, Inc.
Source Location: 3701 State Road 26 East, Lafayette, Indiana 47905
County: Tippecanoe
SIC Code: 3519
Operation Permit No.: T 157-7594-00044
Permit Reviewer: CarrieAnn Ortolani

The Office of Air Management (OAM) has reviewed a Part 70 permit application from Caterpillar, Inc. relating to the operation of an internal combustion engine manufacturing source.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) Three (3) boilers, identified as BY24010, BY24011, and BY24012, constructed in 1979, fired by natural gas or no. 2 fuel oil, with a maximum capacity of 83.3 million British thermal units per hour, each, exhausting to stack B-1.
- (b) Twenty (20) 3500 engine test cells, identified as M501 through M520, constructed in 1979, with a maximum heat input capacity of 7.6 million British thermal units per hour, each, when operating on diesel fuel and 6.1 million British thermal units per hour, each, when operating on natural gas, exhausting at stack vents W-4 (A through T).
- (c) One (1) 3600 engine test cell, identified as M522, constructed in 1979, with a maximum heat input capacity of 7.6 million British thermal units per hour when operating on diesel fuel and 6.1 million British thermal units per hour when operating on natural gas, exhausting at stack vents W-8 (A and B).
- (d) One (1) packaging test cell, identified as M525, constructed in September 1988, with a maximum heat input capacity of 20.3 million British thermal units per hour when operating on diesel fuel and 13.7 million British thermal units per hour when operating on natural gas, exhausting at stack vents W-9 (A through D).
- (e) One (1) power module for parallel testing, identified as M547, constructed in October 1991, with a maximum heat input capacity of 16.9 million British thermal units per hour when operating on diesel fuel and 16.9 million British thermal units per hour when operating on natural gas, exhausting at stack vent W-10.

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for a Part 70 Operating Permit

Source Name: Caterpillar, Inc.
Source Location: 3701 State Road 26 East, Lafayette, Indiana 47905
County: Tippecanoe
Part 70 Operating Permit: OP T 157-7594-00044
SIC Code: 3519
Permit Reviewer: CarrieAnn Ortolani

On October 24, 1998, the Office of Air Management (OAM) had a notice published in the Journal & Courier, Lafayette, Indiana, stating that Caterpillar, Inc. had applied for a Part 70 Operating Permit to operate an internal combustion engine manufacturing source with dry filters and water wash systems as controls. The notice also stated that OAM proposed to issue a Part 70 Operating Permit for this operation and provided information on how the public could review the proposed Part 70 Operating Permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Part 70 Operating Permit should be issued as proposed.

On November 23, 1998, Warren Ewalt of Caterpillar, Inc. submitted comments on the proposed Part 70 Operating Permit. The comments are as follows:

Comment 1:

The current plant manager is Mr. Rod Bussell. Mr. Sid Banwart has been promoted to another position.

Response 1:

The change of the plant manager is noted. The responsible official will remain Warren Ewalt.

Comment 2:

Page 8 of 66, item (k) and page 45 of 66, section D.8, item (k), and page 2 of 20 in the Technical Support Document indicate a capacity of 1.25 engines per hour. It is not intended to be an enforceable condition, a better way to describe this operation would be to provide a capacity range which is an indication of customer demand. It should be stated at 1.25 to 5 engines per hour.

Response 2:

Item (k) of Section A.2 is the one (1) product paint booth which will be taken out of service when the new product paint booth, also identified as W-3 is constructed. As illustrated in page 1 of 1 of TSD Addendum Appendix A, using a capacity up to 5.0 engines per hour results in total potential emissions from the three existing paint booths of less than 250 tons per year. Therefore, using a capacity of 5.0 engines per hour will not change the applicability of any rules. Item (k) has been revised as follows:

- (k) One (1) product paint booth, identified as W-3, constructed in 1979, which will be taken out of service in 1999 when the new product paint booth, also identified as W-3, is installed, equipped with electrostatic airless spray guns and dry filters and a water wash system for overspray controls, capacity: 1.25 to 5.0 engines per hour.

Comment 3:

Pages 32, 35, 39, and 42, which reference the availability to use vendor analysis to determine the sulfur content of the no. 2 fuel oil. How often will the oil analysis and subsequent vendor certification be required? Our facility receives loads of engine test fuel daily and potentially receives boiler fuel daily during the heating season. It would seem burdensome to require oil analyses for every load. Amoco supplies all diesel fuel to our facility, both boiler fuel and test fuel. Enclosed you will find a supplier certification documenting all diesel fuel usage at our facility contains no more than 0.05% sulfur content based on fuel oil analysis. This certification represents all fuel deliveries at our facility. Individual analysis would not be necessary since all fuels meet the certification.

Response 3:

Pursuant to Conditions D.1.6, D.2.5 (now D.2.4), D.4.6 (now D.4.5), and D.6.5, the fuel oil sampling and analysis methods must comply with the requirements of 326 IAC 3-7-4 and 326 IAC 7. Copies of these rules are attached. As stated in Conditions D.1.8(a)(3), D.2.6(a)(3) (now D.2.5(a)(3), D.4.7(a)(3) (now D.4.6(a)(3)) and D.6.6(a)(3) records must include a certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period. IDEM, OAM has determined that certifying that only motor vehicle highway fuels are used will demonstrate compliance with the sulfur dioxide emission limitations. Conditions D.2.5 (now D.2.4) and D.4.6 (now D.4.5) have been revised as follows:

D.2.4 Sulfur Dioxide (SO₂) Emissions and Sulfur Content

Compliance shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed the limits contained in Condition D.2.1 by:
- (1) Providing vendor analysis of fuel delivered, if accompanied by a certification;
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the twenty-one (21) engine test cells, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

- (c) Compliance may also be determined by a certification that all purchased fuels are motor vehicle highway fuels.**

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

D.4.5 Sulfur Dioxide (SO₂) Emissions and Sulfur Content

Compliance with Condition D.4.3 shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed the limits contained in Condition D.4.3 by:
- (1) Providing vendor analysis of fuel delivered, if accompanied by a certification;
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the one (1) power module, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.
- (c) Compliance may also be determined by a certification that all purchased fuels are motor vehicle highway fuels.**

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Comment 4:

Page 43, Condition D.6.6 references diesel fuel and natural gas as fuels for this emission source. Only no. 2 fuel is used for the three (3) peak shaving engines.

Response 4:

Condition D.6.6(b) has been revised as follows:

- (b) To document compliance with Condition D.6.1, the Permittee shall maintain monthly records of the amount of diesel fuel ~~and natural gas~~ used at the three (3) peak shaving diesel generators.

Comment 5:

Page 45, Condition D.8.2 and Condition D.9.7, daily VOC averages. The vast majority of paints used currently as well as in the new booths are below 3.5 pounds per gallon VOC. We would request that only paints above 3.5 pounds per gallon be tracked on a daily basis. If the paints used are at or below 3.5 pounds per gallon, then only a record of the MSDS be kept. In section D.8.9(a) we would request that monthly records be kept to demonstrate compliance with emission limits. In sections D.8.9(a)(2) and (3) and D.9.15(a)(2) and (3) we would request that these sentences be rewritten to say that if the VOC content is equal to or less than 3.5 pounds per gallon, then only MSDS's be kept to demonstrate compliance. However, if the VOC is greater than 3.5 pounds per gallon, then a log of daily usages and a volume weighted VOC content be kept as a demonstration of compliance. Our current compliance method is a monthly VOC report stating paint and solvent disbursement dates during the previous month. The paint and solvent disbursement report detail date, quantity, unit of measure and which department and section the paints or solvents were disbursed to during the month. These disbursements match up with current MSDS's kept on file at our facility. A calculation is then made to determine the amounts of VOC emitted and also the portion of paint/solvent which is wasted and subsequently disposed of off-site.

Response 5:

Conditions D.8.9(a)(2) and (3) and D.9.15(a)(2) and (3) have been revised as follows:

- (2) A log of the dates **in which each coating is disbursed to the paint booths and a log of dates of use for each coating with a VOC content greater than 3.5 pounds per gallon;**
- (3) The volume weighted VOC content of the coatings used for each day **on days when a coating with a VOC content greater than 3.5 pounds per gallon is used.**

Comment 6:

The draft permit requires the creation of Preventive Maintenance Plans. A PMP for an emission control device is a logical method of maintaining the integrity and efficiency of an emission control. However, PMP's for equipment that do not have control devices do not seem to serve any real purpose. Our three main pollution emission processes are boiler operation, engine testing and product painting. The painting process requires emission observation for particulate matter control and the boilers also require visible emission notation. We have PMP's for the painting process only, and request that only the pollution control devices used in the painting process utilize a PMP.

Response 6:

Pursuant to 326 IAC 2-7-4(c)(9) (Permit Application), confirmation that the source maintains on-site a Preventive Maintenance Plan as described in 326 IAC 1-6-3, must be included in the permit application. Pursuant to 326 IAC 2-7-5(13) (Permit Content), a provision that requires the source to do all of the following must be included in each Part 70 permit:

- (1) Maintain on-site the Preventive Maintenance Plan as required under 326 IAC 2-7-4(c)(9);
- (2) Implement the Preventive Maintenance Plan; and
- (3) Forward to the department upon request the Preventive Maintenance Plan.

The requirements in 326 IAC 1-6-1 and 326 IAC 1-6-3 specify that the requirement to maintain a Preventive Maintenance Plan is applicable to any facility that is required to obtain a permit under 326 IAC 2-1-2 (Registration) and 326 IAC 2-1-4 (Operating Permits). IDEM's compliance monitoring guidance states that a compliance monitoring plan is required only for:

- (1) the unit emits particulate matter, sulfur dioxide, or volatile organic compounds; and
- (2) the unit has existing applicable requirements; and
- (3) the unit is subject to a NSPS or NESHAP (for these units current requirements will satisfy as a compliance monitoring plan); or
- (4) the unit has a control device and the allowable emissions exceed 10 pounds per hour; or
- (5) **the unit does not have a control device and has actual emissions exceeding 25 tons per year** (emphasis added).

The guidance does not state that if a facility does not meet the above requirements, compliance monitoring will never be necessary. It does state that a Compliance Monitoring Plan is not required to be submitted with the application. In most cases, the requirement to maintain a Preventive Maintenance Plan and perform compliance monitoring has followed the same guidelines as specified above. However, there are other types of operations that the OAM has determined that compliance monitoring and preventive maintenance plans are necessary to ensure continuous compliance.

IDEM, OAM has decided to consider the test cells self-monitoring since the emission source is the tested engine. No Preventive Maintenance Plan (PMP) will be required for the test cells. Therefore, Conditions D.2.3, D.3.2, D.4.4, D.5.2, and D.7.2 have been removed from the permit and the remainder of these sections have been renumbered. These conditions were removed as follows:

~~D.X.X Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~

~~A Preventive Maintenance Plan, in accordance with Section B – Preventive Maintenance Plan, of this permit, is required for this (these) facility (facilities).~~

Preventive Maintenance Plans are required for the three (3) boilers in Section D.1, three (3) peak shaving diesel generators in Section D.6, two (2) product paint booths and one (1) touch-up paint booth in Section D.8, and two (2) product paint booths in Section D.9.

Upon further review, the OAM has decided to make the following changes to the Part 70 Operating Permit:

Change 1:

Condition C.2 has been revised as follows:

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (~~Visible Emissions~~ **Opacity** Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), ~~visible emissions~~ opacity shall meet the following, unless otherwise stated in this permit:

- (a) ~~Visible emissions~~ **Opacity** shall not exceed an average of forty percent (40%) ~~opacity in twenty-four (24) consecutive readings, any one (1) six (6) minute averaging period~~ as determined in 326 IAC 5-1-4.
- (b) ~~Visible emissions~~ **Opacity** shall not exceed sixty percent (60%) ~~opacity~~ for more than a cumulative total of fifteen (15) minutes (sixty (60) readings **as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor**) in a six (6) hour period.

Change 2:

The monitoring frequencies in Conditions D.8.8 and D.9.14 have been revised as follows:

D.8.8 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters and water wash system. To monitor the performance of the dry filters and water wash system, ~~daily~~ **weekly** observations shall be made of the overspray from the paint booth stack(s) while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) ~~Weekly~~ **Monthly** inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

D.9.14 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters and water wash system. To monitor the performance of the dry filters and water wash system, ~~daily~~ **weekly** observations shall be made of the overspray from the paint booth stack(s) while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

- (b) ~~Weekly~~ **Monthly** inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Change 3:

As a result of Change 2, Conditions D.8.9(b) and D.9.15(b) have been revised as follows:

- (b) To document compliance with Conditions D.8.1 and D.8.7, the Permittee shall maintain a log of ~~daily~~ **weekly** overspray observations, daily and ~~weekly~~ **monthly** inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (b) To document compliance with Condition D.9.5 and D.9.13, the Permittee shall maintain a log of ~~daily~~ **weekly** overspray observations, daily and ~~weekly~~ **monthly** inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

Change 4:

The IDEM now believes that Condition B.27, Credible Evidence, is not necessary and the condition has been removed from the permit. The issues regarding credible evidence can be adequately addressed during a showing of compliance or noncompliance. Indiana's statutes, and the rules adopted under their authority, govern the admissibility of evidence in any proceeding. Indiana law contains no provisions that limit the use of any credible evidence and an explicit statement is not required in the permit. Therefore, Condition B.27 has been removed from the permit.

~~B.27 Credible Evidence [326 IAC 2-7-5(3)][62 Federal Register 8313][326 IAC 2-7-6]~~

~~Notwithstanding the conditions of this permit that state specific methods that may be used to assess compliance or noncompliance with applicable requirements, other credible evidence may be used to demonstrate compliance or non-compliance.~~

- (f) One (1) dual fuel 3600 test stand, identified as M523, constructed in March 1994, with a maximum heat input capacity of 15.3 million British thermal units per hour when operating on diesel fuel and 11.0 million British thermal units per hour when operating on natural gas, exhausting at stack vents W-11 (A and B).
- (g) One (1) peak shaving diesel generator, identified as EL45016, constructed in January 1995, with a maximum heat input capacity of 32.2 million British thermal units per hour, exhausting at stack vents W-13 and W-14.
- (h) One (1) sound attenuation test stand, identified as M528, constructed in February 1996, with a maximum heat input capacity of 17.0 million British thermal units per hour when operating on diesel fuel and 17.0 million British thermal units per hour when operating on natural gas, exhausting at stack vent W-12A.
- (i) One (1) product paint booth, identified as M751, constructed in 1979, equipped with electrostatic airless spray guns and dry filters for overspray controls, exiting at stack W-1, capacity: 15 engines per hour.
- (j) One (1) touch-up spray paint booth, identified as M775, constructed in 1979, equipped with electrostatic airless spray guns and dry filters for overspray controls, exiting at stack W-2.
- (k) One (1) product paint booth, identified as W-3, to be constructed in 1999, equipped with electrostatic airless spray guns and a water wash system for overspray controls, capacity: 5 engines per hour.
- (l) One (1) product paint booth, identified as W-3, constructed in 1979, which will be taken out of service in 1999 when the new product paint booth, also identified as W-3, is installed, equipped with electrostatic airless spray guns and dry filters for overspray controls, capacity: 1.25 engines per hour.
- (m) One (1) product paint booth, identified as W-33, to be constructed in 1999, equipped with electrostatic airless spray guns and dry filters for overspray controls, capacity: 5 engines per hour.

Note: Paint booths W-3 and W-33, to be constructed in 1999, were recently permitted under CP 157-8897-00044, issued on December 12, 1997.

Unpermitted Emission Units and Pollution Control Equipment Requiring ENSR

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Requiring ENSR

There are no new facilities to be reviewed under the ENSR process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

- (b) Propane for liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour.
- (c) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
- (d) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour.
- (e) Combustion source flame safety purging on startup.
- (f) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (g) The following VOC and HAP storage containers:
 - (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
 - (2) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.
- (h) Equipment used exclusively for filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.
- (i) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings.
- (j) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (k) Cleaners and solvents characterized as follows:
 - (1) having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38EC (100EF); or
 - (2) having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (l) The following equipment related to manufacturing activities not resulting in the emission of HAPS: brazing equipment, cutting torches soldering equipment, welding equipment.
- (m) Closed loop heating and cooling systems.
- (n) Structural steel and bridge fabrication activities using 80 tons or less of welding consumables.
- (o) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1 percent by volume.

- (p) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPS.
- (q) Noncontact cooling tower systems with forced and induced draft cooling tower system not regulated under a NESHAP.
- (r) Quenching operations used with heat treating processes.
- (s) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (t) Heat exchanger cleaning and repair.
- (u) Process vessel degassing and cleaning to prepare for internal repairs.
- (v) Paved and unpaved roads and parking lots with public access.
- (w) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (x) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (y) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (z) On-site fire and emergency response training approved by the department.
- (aa) Emergency generators as follows:
 - Gasoline generators not exceeding 110 horsepower.
 - Diesel generators not exceeding 1,600 horsepower.
- (bb) Other emergency equipment as follows: stationary fire pumps.
- (cc) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.
- (dd) Filter or coalescer media changeout.
- (ee) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (ff) Other activities or categories **not previously identified** with emissions equal to or less than the insignificant activity thresholds:
 - (1) One (1) diesel fuel tank, capacity: 150,000 gallons.

- (2) One (1) No. 2 heating fuel oil tank, capacity: 400,000 gallons.
- (3) One (1) No. 2 heating fuel day tank, capacity: 25,000 gallons.
- (4) One (1) propane storage tank, capacity: 12,000 gallons.
- (gg) Other activities **not previously identified** with individual HAP emissions greater than one (1) pound per day, but less than five (5) pounds per day or one (1) tons per year of a single HAP:
 - (1) One (1) methanol underground storage tank, capacity: 15,000 gallons.
 - (2) One (1) ethylene storage tank, capacity: 20,000 gallons.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following: list permits, registrations, modifications, exemptions, etc.

- (a) PC (79) 1414, issued on July 25, 1979;
- (b) OP 79-04-91-0408, issued on October 27, 1987;
- (c) OP 79-04-91-0409, issued on October 27, 1987;
- (d) OP 79-04-91-0410, issued on October 27, 1987;
- (e) OP 79-04-91-0411, issued on October 27, 1987;
- (f) Amendment to OP 79-04-91-0411, issued October 7, 1992;
- (g) OP 79-04-91-0412, issued on October 27, 1987;
- (h) PC (79) 1706, issued on September 29, 1988;
- (i) OP 79-04-91-0439, issued on April 5, 1989;
- (j) Amendment to PC (79) 1706 and OP 79-04-91-0439, issued February 18, 1994;
- (k) R 157-00044, issued on April 4, 1991;
- (l) CP 157-2041-00044, issued on October 22, 1991;
- (m) Amendment to CP 157-2041-00044, issued March 29, 1994;
- (n) CP 157-3166-00044, issued on March 1, 1994;
- (o) CP 157-4037-00044, issued on December 16, 1994;
- (p) CP 157-4123-00044, issued on January 9, 1995;

- (q) CP 157-4969-00044, issued on February 12, 1996; and
- (r) CP 157-8897-00044, issued on December 12, 1997.

All conditions from previous approvals that have not previously been superceded, modified, or replaced in another permit or permit amendment were incorporated into this Part 70 operating permit. Existing limits have been maintained, but the value of some limits are changed as indicated below:

- (a) The sound attenuation test stand was limited in CP 157-4969, issued on February 12, 1996 to 10,624 gallons per month of diesel input and 3.18 million cubic feet per month of natural gas input. The limit is changed in this Part 70 operating permit to 166 kilogallons of diesel fuel per twelve (12) consecutive months, where one (1) million cubic feet of natural gas is equivalent to 5.97 kilogallons of diesel fuel. This limit has changed for the following reasons:
 - (1) Updated emission factors.
 - (2) The equivalency developed allows for flexibility between fuels. Previously the source was required to operate a certain percentage of the time on each fuel.
 - (3) Twelve (12) consecutive month limit is requested as opposed to the fixed monthly limits.
- (b) The peak shaving system was limited in CP 157-4123, issued on January 9, 1995, to 156,000 gallons of diesel fuel per 365 day period. The limit is changed in this Part 70 operating permit to 166,000 gallons of diesel fuel per twelve (12) consecutive months. This limit has changed due to updated emission factors and the use of the rolling monthly limit as opposed to the rolling daily limit.
- (c) The power module was limited in the amendment to CP 157-4037, issued on December 16, 1994, to 90,060 gallons of diesel fuel per twelve (12) consecutive months. This limit is changed in this Part 70 operating permit to 166,000 gallons of diesel fuel per twelve (12) consecutive months, where one (1) million cubic feet of natural gas is equivalent to 1.14 kilogallons of diesel fuel. In addition, a VOC limit has been added which requires natural gas usage to be limited to 76.1 million cubic feet per twelve (12) consecutive months, where one thousand (1,000) gallons of diesel fuel is equivalent to 0.051 million cubic feet of natural gas. The former limit was requested by the Permittee. The applicant is now requesting the maximum possible usage rate that does not exceed the necessary NO_x limit to avoid the requirements of 326 IAC 2-2, PSD and VOC limit to avoid 326 IAC 8-1-6, New facilities: General reduction requirements.
- (d) The dual fuel 3600 test stand was limited in CP 157-3166, issued on March 1, 1994, to 130,000 gallons of diesel fuel per year and 58 million cubic feet per year of natural gas. This limit is changed in this Part 70 operating permit to 166,000 gallons of diesel fuel per twelve (12) consecutive months, where one (1) million cubic feet of natural gas is equivalent to 0.640 kilogallons of diesel fuel. The limit is changed in this permit because the equivalency developed allows for flexibility between fuels. Previously the source was required to operate a certain percentage of the time on each fuel.

- (e) The packaging test cell was limited in the amendment to PC (79) 1706, issued on September 29, 1988, to 169,725 gallons of diesel fuel per consecutive 365-day period. This limit is changed in this Part 70 operating permit to 166,000 gallons of diesel fuel per twelve (12) consecutive months, where one (1) million cubic feet of natural gas at this facility shall be equal to 0.640 kilogallons of diesel fuel. The limit is changed in this permit because the previous limit resulted in 39.9 tons of NO_x per year. In order to ensure that the NO_x emissions do not exceed 40 tons per year, the NO_x emissions are limited in this permit to 39 tons per year.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on December 12, 1996. Additional information was received on March 17, June 1, and June 25, 1998.

A notice of completeness letter was mailed to the source on January 9, 1997.

Emission Calculations

See pages 1 through 11 of 11 of Appendix A of this document for detailed emissions calculations.

Potential Emissions

Pursuant to 326 IAC 1-2-55, Potential Emissions are defined as "emissions of any one (1) pollutant which would be emitted from a facility, if that facility were operated without the use of pollution control equipment unless such control equipment is necessary for the facility to produce its normal product or is integral to the normal operation of the facility."

Pollutant	Potential Emissions (tons/year)
PM	390
PM ₁₀	378
SO ₂	810
VOC	733
CO	1,459
NO _x	3,989

Note: For the purpose of determining Title V applicability for particulates, PM₁₀, not PM, is the regulated pollutant in consideration.

HAP's	Potential Emissions (tons/year)
Benzene	Less than 10
Toluene	Less than 10
Xylene	Greater than 10
Ethyl benzene	Greater than 10
Glycol Ethers	Greater than 10
Propylene	Less than 10
1,3-Butadiene	Less than 10
Formaldehyde	Less than 10
Acetaldehyde	Less than 10
Acrolein	Less than 10
Naphthalene	Less than 10
Arsenic	Less than 10
Chromium	Less than 10
Cobalt	Less than 10
Lead	Less than 10
Manganese	Less than 10
Nickel	Less than 10
Beryllium	Less than 10
Cadmium	Less than 10
Mercury	Less than 10
TOTAL	Greater than 25

- (a) The potential emissions (as defined in 326 IAC 1-2-55) of PM₁₀, SO₂, VOC, CO, and NO_x are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential emissions (as defined in 326 IAC 1-2-55) of any single HAP is equal to or greater than ten (10) tons per year and the potential emissions (as defined in 326 IAC 1-2-55) of a combination HAPS is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

- (c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. The information reflects the 1996 OAM emission data from the AIRS Facility Subsystem Quick Look Report released March 30, 1998. The HAP emission estimates were supplied by the applicant.

Pollutant	Actual Emissions (tons/year)
PM	15.7
PM ₁₀	15.0
SO ₂	13.2
VOC	71.8
CO	84.8
NO _x	261
HAP (Ethyl benzene)	0.26
HAP (Toluene)	2.98
HAP (Xylene)	29.9
HAP (MIBK)	2.85

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPS
Three (3) boilers	10.4	10.2	215	2.04	26.1	104	0.501
Twenty-one (21) engine test cells	17.8	17.0	16.6	44.6	158	249	0.327
One (1) product paint booth and one (1) touch-up paint booth	0.291	0.291	0.00	82.2	0.00	0.00	19.8
One (1) packaging test cell	2.78	2.66	2.59	14.3	34.6	39	0.042
One (1) power module	2.78	2.66	2.59	24	14.0	39	0.035
One (1) dual fuel test stand	2.78	2.66	2.59	11.5	27.8	39	0.032
One (1) peak shaving diesel generator	2.78	2.66	2.59	2.66	8.47	39	0.066
One (1) sound attenuation test stand	2.78	2.66	2.59	2.66	8.47	39	0.035
Two (2) product paint booths, W-3 and W-33	0.600	0.600	0.00	70.6	0.00	0.00	35.9
Total Emissions	43.0	41.4	245	255	277	548	56.7

- (a) See pages 8, 10 and 11 of 11 of Appendix A of this document for limited emissions calculations.
- (b) The limited emissions from the two (2) product paint booths, W-3 and W-33, are from the new paint booths to be installed in 1999. The existing W-3 paint booth has a lower potential to emit than the new booths and no yearly emission limitation. The two (2) paint booths identified as W-3 will not be operated as part of production at the same time. The existing paint booth will be taken out of service when construction of the new paint booth is complete and the booth is ready for operation.

County Attainment Status

The source is located in Tippecanoe County.

Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Tippecanoe County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

- (a) The gasoline fuel transfer facilities which are insignificant activities are not subject to the requirements of 40 CFR Part 60, Subpart R and 40 CFR Part 63, Subpart XX because this source is not a bulk gasoline terminal as defined by 40 CFR Part 60, Subpart R.
- (b) Since the methanol tank, propane tank, no. 2 fuel oil day tank, and ethylene glycol tank were constructed after May 18, 1978 and prior to July 23, 1984, the tanks can be subject to the requirements of 40 CFR Part 60, Subpart Ka. The tanks have capacities less than 40,000 gallons, each. Therefore, the requirements of 40 CFR Part 60, Subpart Ka are not applicable.
- (c) Since the diesel fuel tank with a capacity of 150,000 gallons and the no. 2 fuel oil tank with a capacity of 400,000 gallons were both constructed in 1981, they are subject to the requirements of 40 CFR Part 60, Subpart Ka. The true vapor pressure of the fuel oil stored in each tank is less than 1.5 pounds per square inch (psia). Therefore, there is no emission standard applicable to the tanks pursuant to 40 CFR Part 60.112a. Since the true vapor pressure of the fuel oil stored in each tank is less than 1.0 psia, the tanks are exempt from the record keeping requirements of 40 CFR Part 60.114a pursuant to 40 CFR Part 60.114a(e). Should the true vapor pressure of the petroleum liquid stored in either tank at any time exceed 1.0 psia, the owner or operator of the tanks must maintain a record of the petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during that storage period. Should, at any time, the true vapor pressure of the liquid stored exceed 1.5 psia, the tanks will become subject to the requirements of 40 CFR Parts 60.112a and 60.113a.
- (d) The three (3) steam generating boilers, identified as BY24010, BY24011, and BY24012, constructed in 1979, with maximum capacities of 83.3 million British thermal units per hour, each, are not subject to the requirements of 40 CFR Part 60, Subpart D because the boilers have capacities of less than 250 million British thermal units per hour. The three (3) boilers are not subject to the requirements of 40 CFR Part 60, Subpart Db because the boilers have capacities less than 100 million British thermal units per hour and the boilers were constructed prior to June 19, 1984. The three (3) boilers are not subject to the requirements of 40 CFR Part 60, Subpart Dc because the boilers were constructed prior to June 9, 1989.

- (e) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 1-5-2 (Emergency Reduction Plans)

The source has submitted an Emergency Reduction Plan (ERP) on December 12, 1996. The ERP will be verified to fulfill the requirements of 326 IAC 1-5-2 (Emergency Reduction Plans).

326 IAC 1-7 (Stack Height Provisions)

Since all stacks have been previously permitted, the requirements of 326 IAC 1-7 (Stack height provisions) are not included in this permit.

326 IAC 2-2 (Prevention of Significant Deterioration)

This source is a major source pursuant to 326 IAC 2-2(PSD) and 40 CFR 52.21.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting) because it has the potential to emit more than one hundred (100) tons per year of PM₁₀, SO₂, VOC, CO and NO_x. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this permit:

- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings as determined by 326 IAC 5-1-4,
- (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-1-3.4 (New Source Toxics Control)

The two (2) product paint booths (W-3 and W-33), to be constructed in 1999, are major sources of hazardous air pollutants (HAPS). Therefore, the requirements of 326 IAC 2-1-3.4 can be applicable to these facilities. This rule was overlooked in the processing of CP 157-8897-00044, issued on December 12, 1997.

Since these facilities are replacing an existing coating facility that is a major source of HAPS, it is not considered a new construction. Therefore, the requirements of 326 IAC 2-1-3.4 are not applicable to these facilities. However, pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings delivered to the applicators at the two (2) product paint booths (W-3 and W-33) shall be limited to 3.5 pounds of VOC per gallon of coating less water, for air dried coatings and forced warm air dried coatings. The facilities will also use electrostatic airless spray guns in order to minimize emissions.

326 IAC 2-2 (Prevention of Significant Deterioration)

This major source has agreed to the following emissions limitations based on the construction dates of each facility. Due to these limitations, the source will not need to undergo PSD review. See pages 8, 10 and 11 of 11 of Appendix A of this document for calculations of limited emissions. See page 9 of 11 of Appendix A for calculations of fuel usage limitations and fuel equivalencies.

- (a) The emissions from the three (3) boilers, constructed in 1979, shall not exceed 246 tons of SO₂ per twelve (12) consecutive months. Pursuant to PC (79) 1414, issued July 25, 1979, the sulfur content of the fuel oil shall not exceed 0.29% unless the actual steam rate is such that the combination of steam rate and a higher sulfur content will result in an annual emission of less than 246 tons per year of sulfur dioxide. Pursuant to OP 79-04-91-0408, OP 79-04-91-0409, and OP 79-04-91-0410, issued on October 27, 1987, the maximum combined flow rate of steam from the three (3) boilers is limited to 140,000 pounds per hour. The flow rate will be determined with a turbine meter in the common header of the three (3) boilers. The total steam load in flow rate per hour, total flow per 24 hour period, and total annual flow will be determined by computer and recorded. This limit will result in compliance with 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations).
- (b) The NO_x emissions from the twenty-one (21) engines test cells, constructed in 1979, shall not exceed 249 tons per twelve (12) consecutive months. This limit is equivalent to a diesel fuel throughput at the twenty-one (21) engine test cells of 1,062 kilogallons per twelve (12) consecutive months. For the purposes of this NO_x limit, one (1) million cubic feet natural gas usage by the twenty (20) engine test cells (M501-M520) will be equivalent to 6.81 kilogallons of diesel fuel at the test cells, and one (1) million cubic feet of natural gas usage at the one (1) engine test cell (M522) will be equivalent to 0.640 kilogallons of diesel fuel at the test cells. As a result of the previous limitation, CO emissions from these facilities are limited to 173 tons per twelve (12) consecutive months and the VOC emissions from these facilities are limited to 44.6 tons per twelve (12) consecutive months.
- (c) Since the source was an existing major PSD source when the one (1) packaging test cell was constructed in September 1998, the one (1) packaging test cell will be limited to NO_x emissions of 39 tons per twelve (12) consecutive months in order to be a minor modification to an existing major source. This limit is equivalent to limiting diesel fuel usage to 166 kilogallons per twelve (12) consecutive months. For the purposes of this NO_x limit, one (1) million cubic feet of natural gas usage at this facility is equal to 0.640 kilogallons of diesel fuel.
- (d) Since the source was a major source pursuant to 326 IAC 2-2 when the one (1) power module was constructed, the following limits apply:

- (a) The NO_x emissions from the one (1) power module, constructed in October 1991, shall be limited to 39 tons per twelve (12) consecutive months. This limit is equivalent to a diesel fuel usage rate of 166 kilogallons per twelve (12) consecutive months. For the purposes of this NO_x limit, one (1) million cubic feet of natural gas usage at this facility is equivalent to 1.14 kilogallons of diesel fuel.
- (b) The VOC emissions will be limited to 24 tons per twelve (12) consecutive months. This is equivalent to a natural gas usage rate of no more than 76.1 million cubic feet per twelve (12) consecutive months. For the purposes of this VOC limit, one (1) kilogallon of diesel fuel usage at this facility is equivalent to 0.051 million cubic feet of natural gas.
- (c) As a result of these limitations, the PM₁₀ emissions will be limited to no more than 2.66 tons per twelve (12) consecutive months.
- (e) Since the source was a major source pursuant to 326 IAC 2-2 when the one (1) dual fuel 3600 test stand was constructed in 1994, the following limits apply:
 - (1) The NO_x emissions from the one (1) dual fuel 3600 test stand, constructed in 1994, shall be limited to 39 tons per twelve (12) consecutive months. This limit is equivalent to a diesel fuel usage rate of 166 kilogallons per twelve (12) consecutive months. For the purposes of this NO_x limit, one (1) million cubic feet of natural gas usage at this facility is equivalent to 0.640 kilogallons of diesel fuel.
 - (2) As a result of this limitation, the PM₁₀ emissions will be limited to 2.66 tons per twelve (12) consecutive months.
- (f) Since the source was a major source pursuant to 326 IAC 2-2 when the one (1) peak shaving diesel generator was constructed, the following limits apply:
 - (1) The NO_x emissions from the one (1) peak shaving diesel generator shall be limited to 39 tons per twelve (12) consecutive months. This limit is equivalent to a diesel fuel usage rate of 166 kilogallons per twelve (12) consecutive months.
 - (2) As a result of this limit, the PM emission rate is limited to 2.78 tons per twelve (12) consecutive months, the PM₁₀ emission rate is limited to 2.66 tons per twelve (12) consecutive months, and the CO emission rate is limited to 8.47 tons per twelve (12) consecutive months.
- (g) Since the source was a major source pursuant to 326 IAC 2-2 when the one (1) sound attenuation test cell was constructed, the following limits apply:
 - (1) The NO_x emissions from the one (1) sound attenuation test cell shall be limited to 39 tons per twelve (12) consecutive months. This limit is equivalent to a diesel fuel usage rate of 166 kilogallons per twelve (12) consecutive months. For the purposes of this NO_x limit, one (1) million cubic feet of natural gas usage at this facility is equivalent to 5.97 kilogallons of diesel fuel.
 - (2) As a result of this limit, the PM₁₀ emission rate is limited to 2.66 tons per twelve (12) consecutive months. This will make the requirements of 326 IAC 2-2 (PSD) not applicable.

- (h) Pursuant to CP 157-8897, issued December 12, 1997, the VOC usage including coatings, dilution solvents, and cleaning solvents, by the two (2) product paint booths (W-3 and W-33) are limited to 70.7 tons per twelve (12) consecutive months. This limit, in combination with the emissions credits of 31.6 tons per year from the removal of the old surface coating booth will result in a VOC increase of no more than 39 tons per year. This will make the requirements of 326 IAC 2-2 (PSD) not applicable.

326 IAC 6-2-3 (Particulate emission limitations for sources of indirect heating)

Pursuant to CP 73-04-91-0408 issued October 27, 1987, the three (3) boilers, identified as BY24010, BY24011, and BY24012, constructed in 1979, with maximum capacities of 83.3 million British thermal units per hour, each, shall be limited to PM emissions of 0.6 pound per million British thermal units of heat input. This limit is based upon the following calculation:

$$Pt = (C \times a \times h) / (76.5 \times Q^{0.75} \times N^{0.25})$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 million British thermal units per hour heat input.

h = Stack height in feet. If a number of stacks of different heights exist, the average stack height will be computed using a weighted average of stack heights.

$$Pt = (50 \mu\text{g}/\text{m}^3 \times 0.67 \times 160\text{ft}) / (76.5 \times 249.9^{0.75} \times 1^{0.25}) = 1.11 \text{ lbs PM} / \text{MMBtu}$$

This number is greater than the maximum allowable emissions stated in 326 IAC 6-2-3(e). Therefore the allowable emissions for the three (3) boilers are 0.6 pound PM per million British thermal units.

Since the potential emissions are 15.3 tons per year, equivalent to 3.50 pounds per hour, when operating with natural gas, and 15.6 tons per year, equivalent to 3.56 pounds per hour, when operating with no. 2 fuel oil, the three (3) boilers will comply with this rule based upon the following calculation:

$(3.56 \text{ lbs/hr} / 3 \text{ boilers}) / 83.3 \text{ MMBtu/hr} = 0.014 \text{ pounds per million British thermal units}$

326 IAC 6-3-2 (Process Operations)

- (a) Pursuant to CP 157-8897-00044, issued on December 12, 1997, the particulate matter (PM) from the two (2) product paint booths (W-3 and W-33) shall each be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour.}$$

Compliance will be demonstrated by operating the dry filters and water wash system at all times the paint booths (W-3 and W-33) are in operation.

- (b) The particulate matter (PM) from the one (1) product paint booth (M751) and one (1) touch-up spray paint booth (M775) shall each be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour.}$$

Compliance will be demonstrated by operating the dry filters at all times the paint booths (M751 and M775) are in operation.

- (c) The particulate matter (PM) from the insignificant activities of brazing, cutting, soldering, and welding and the grinding and machining operations shall each be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour.}$$

Compliance will be demonstrated by operating the corresponding control devices at all times the facilities are in operation.

326 IAC 7-1 (Sulfur Dioxide Emission Limitations)

The requirements of 326 IAC 7-1 will apply to the peak shaving diesel generators, the three (3) boilers, and the twenty-one (21) engine test cells all with potential sulfur dioxide emissions greater than twenty-five (25) tons per year.

- (a) Pursuant to CP 157-4123, issued January 9, 1995, the sulfur dioxide emissions from the peak shaving system shall be limited to 0.5 pound per million British thermal unit of heat input. The peak shaving diesel generators will be in compliance with this rule if the sulfur content of the fuel does not exceed 0.46% by weight.

- (b) Pursuant to PC (79) 1414, issued July 25, 1979, and OP 79-04-91-0408, OP 79-04-91-0409, and OP 79-04-91-0410, issued on October 27, 1987, the sulfur content of the fuel oil shall not exceed 0.29% unless the actual steam rate is such that the combination of steam rate and a higher sulfur content will result in an annual emission of less than 246 tons per year of sulfur dioxide. Therefore, the three (3) boilers will be in compliance with this rule.
- (c) The sulfur dioxide emissions from the twenty-one (21) engine test cells shall be limited to 0.5 pound per million British thermal unit of heat input. The twenty-one (21) engine test cells will be in compliance with this rule if the sulfur content of the fuel does not exceed 0.46% by weight.
- (d) This rule does not apply to the power module parallel testing facility with potential sulfur dioxide emissions less than 25 tons per year. Pursuant to CP 157-4037, issued December 16, 1994, this rule was applicable. Since the potential emissions for this facility were computed using a sulfur content of 0.45%, the sulfur content limit will be included in this permit to ensure that the rule is not applicable. Pursuant to CP 157-4037, issued December 16, 1994, the sulfur dioxide emissions from the power module parallel testing facility shall be limited to 0.5 pound per million British thermal unit of heat input. The power module parallel testing facility will be in compliance with this limit if the sulfur content of the fuel does not exceed 0.45% by weight.

326 IAC 8-1-6 (New facilities; General reduction requirements)

The one (1) power module and the one (1) peak shaving diesel generator constructed after 1980 have potential VOC emissions greater than 25 tons per year. Since the VOC emissions from the one (1) power module are limited to 24 tons per year and the VOC emissions from the one (1) peak shaving diesel generator are limited to 17.0 tons per year, this rule is not applicable to those facilities.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings delivered to the applicators at the two (2) product paint booths (W-3 and W-33) shall be limited to 3.5 pounds of VOC per gallon of coating less water, for air dried coatings and forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

- (b) Since the two (2) product paint booths (W-3 and M751) and one (1) touch-up booth (M775) constructed in 1979 were modified to use higher VOC coatings after November 1, 1980 in Tippecanoe county, and each booth has the potential to emit more than 25 tons per year of VOC, this rule was determined to be applicable in the amendment to OP 79-04-91-0411, issued on October 7, 1992. The volatile organic compound (VOC) content of coatings delivered to the applicators at the two (2) product paint booths (W-3 and M751) and one (1) touch-up booth (M775) shall be limited to 3.5 pounds of VOC per gallon of coating less water, for air dried coatings and forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

- (a) The two (2) product paint booths (W-3 and W-33) have applicable compliance monitoring conditions as specified below:
 - (1) Daily inspections shall be performed to verify the placement, integrity and particle loading of the dry filters and water wash systems. To monitor the performance of the dry filters, daily observations shall be made of the overspray while the facility in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C of the permit - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
 - (2) Weekly inspections shall be performed of the emissions from the stacks W-3 and W-33, and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C of the permit - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
 - (3) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-3-2 (Process Operations) and 326 IAC 2-7 (Part 70).

- (b) The two (2) product paint booths (M751 and existing W-3) and one (1) touch-up spray paint booth (M775) have applicable compliance monitoring conditions as specified below:
- (1) Daily inspections shall be performed to verify the placement, integrity and particle loading of the dry filters and water wash systems. To monitor the performance of the dry filters, daily observations shall be made of the overspray while the facility in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C of the permit - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
 - (2) Weekly inspections shall be performed of the emissions from the stacks W-1, W-2, and W-3, and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C of the permit - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
 - (3) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-3-2 (Process Operations) and 326 IAC 2-7 (Part 70).

- (c) The three (3) boilers have applicable compliance monitoring conditions as specified below:

Daily visible emission notations of the boiler stack (B-1) exhaust shall be performed during normal daylight operations when burning no. 2 fuel oil and exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-2-3 (Particulate emission limitations for sources of indirect heating) and 326 IAC 2-7 (Part 70).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants (HAPS) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

- (a) This source will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the 1990 Clean Air Act Amendments.
- (b) See pages 5 and 7 of 11 of the attached calculations for detailed air toxic calculations.

Conclusion

The operation of this an internal combustion engine manufacturing source shall be subject to the conditions of the attached proposed **Part 70 Permit No. T 157-7594-00044.**

**Appendix A: Federal Potential Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

Company Name: Caterpillar, Inc.
Address City IN Zip: 3701 State Road 26 East, Lafayette, IN 47905
Part 70: T157-7594
Plt ID: 157-00044
Reviewer: CarrieAnn Ortolani
Date: December 1, 1998

Material	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Flash-off (fraction)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential tons per year	lb VOC /gal solids	Transfer Efficiency
W-1																	
Urethane Paint	10.92	31.80%	0.0%	31.8%	0.0%	68.20%	0.10300	15.000	1.000	3.47	3.47	5.37	128.76	23.50	12.60	5.09	75%
Solvent	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.10300	15.000	1.000	7.04	7.04	10.88	261.04	47.64	0.00	n/a	75%
W-2																	
Urethane Paint	10.92	31.80%	0.0%	31.8%	0.0%	68.20%	0.24000	1.000	1.000	3.47	3.47	0.83	20.00	3.65	1.96	5.09	75%
Solvent	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.24000	1.000	1.000	7.04	7.04	1.69	40.55	7.40	0.00	n/a	75%
W-3																	
Urethane Paint	10.92	31.80%	0.0%	31.8%	0.0%	68.20%	1.87000	5.000	1.000	3.47	3.47	32.47	779.24	142.21	76.25	5.09	75%
Solvent	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.17969	5.000	1.000	7.04	7.04	6.33	151.80	27.70	0.00	n/a	75%
W-33																	
Urethane Paint	10.92	31.80%	0.0%	31.8%	0.0%	68.20%	0.25000	5.000	1.000	3.47	3.47	4.34	104.18	19.01	10.19	5.09	75%
Solvent	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.03125	5.000	1.000	7.04	7.04	1.10	26.40	4.82	0.00	n/a	75%
Solvent	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.06250	5.000	1.000	7.04	7.04	2.20	52.80	9.64	0.00	n/a	75%
W-3 to be removed																	
Urethane Paint	10.92	31.80%	0.0%	31.8%	0.0%	68.20%	1.42000	5.000	1.000	3.47	3.47	24.66	591.72	107.99	57.90	0.00	75%
Solvent	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.12000	5.000	1.000	7.04	7.04	4.22	101.38	18.50	0.00	n/a	75%

State Potential Emissions**Add worst case coating to all solvents**

65.2	1565	286	101
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* Emissions from booth W-3 that will be removed are not counted towards potential since the existing booth W-3 and new booth W-3 will not operate at the same time.

Control Technology Emissions (Combustion)						Emission Factors										
Type	Number	Capacity MMBtu/hr	Gas usage MMCF/yr	PM lb/MMCF	PM10 lb/MMCF	SO2 lb/MMCF	NOx lb/MMCF	VOC lb/MMCF	CO lb/MMCF		PM tons/yr	PM10 tons/yr	Emissions SO2 tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr
Catalytic			0.0	3.0	3.0	0.6	100.0	5.3	35.0		0.0	0.0	0.0	0.0	0.0	0.0
Thermal			0.0	3.0	3.0	0.6	140.0	2.8	20.0		0.0	0.0	0.0	0.0	0.0	0.0
Total			0.0								0.0	0.0	0.0	0.0	0.0	0.0
										Control Efficiency		Controlled	Controlled	Controlled	Controlled	
										VOC	PM	VOC pounds	VOC pounds	VOC	Particulate	
											0.98	per hour	per day	tons/yr	tons/yr	

Controlled Emissions due to Surface Coating Operations and Controls

65.2	1565	286	2.02
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METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * Flash-off
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day) * Flash-off
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs) * Flash-off
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids) * Flash-off
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
10 < MM BTU/HR <100
Small Industrial Boiler**

Company Name: Caterpillar, Inc.
Address City IN Zip: Lafayette, Indiana
Part 70: T157-7594
Plt ID: 157-00044
Reviewer: CarrieAnn Ortolani
Date: December 12, 1996

**Three (3) Boilers
BY24010, BY24011, BY24012**

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

249.9

2189

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	14.0	14.0	0.6	140.0	2.8	35.0
Potential Emission in tons/yr	15.3	15.3	0.657	153	3.06	38.3

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 140, Low NOx Burner = 81, Flue gas recirculation = 30

Emission Factors for CO: Uncontrolled = 35, Low NOx Burner = 61, Flue gas recirculation = 37

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emissions Calculations
Industrial Boilers
#1 and #2 Fuel Oil**

Page 2 of 11 TSD App A

Company Name: Caterpillar, Inc.
Address, City IN Zip: Lafayette, Indiana
Part 70: T157-7594
Plt ID: 157-00044
Reviewer: CarrieAnn Ortolani
Date: December 12, 1996

Three (3) Boilers

BY24010, BY24011, BY24012

Heat Input Capacity
MMBtu/hr

Potential Throughput
kgals/year

S = Weight % Sulfur
0.50

249.9

15637

	Pollutant					
Emission Factor in lb/kgal	PM 2.0	PM10 1.0	SO2 71.0 (142.0S)	NOx 20.0	VOC 0.20	CO 5.0
Potential Emission in tons/yr	15.6	7.82	555	156	1.56	39.1

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-2 and 1.3-4 (SCC 1-02-005-01/02/03)

Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
10 < MM BTU/HR <100
Reciprocating Engines

Page 3 of 11 TSD App A

Company Name: Caterpillar, Inc.
Address City IN Zip: Lafayette, Indiana
Part 70: T157-7594
Plt ID: 157-00044
Reviewer: CarrieAnn Ortolani
Date: December 12, 1996

Twenty (20) Engine Test Cells

M501-M520

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

122.0

1069

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	24.4	24.4	0.0	3196.0	572.0	2022.0
Potential Emission in tons/yr	13.0	13.0	0.00	1708	306	1080

One (1) Engine Test Cell

M522

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

6.1

53.4

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	14.0	14.0	0.0	300.0	239.0	576.0
Potential Emission in tons/yr	0.374	0.374	0.00	8.02	6.39	15.4

Packaging Test Cell

M525

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

13.7

120

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	14.0	14.0	0.0	300.0	239.0	576.0
Potential Emission in tons/yr	0.840	0.840	0.00	18.0	14.3	34.6

Dual Fuel Test Stand

M523

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

11.0

96.4

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	14.0	14.0	0.0	300.0	239.0	576.0
Potential Emission in tons/yr	0.675	0.675	0.00	14.5	11.5	27.8

Power Module

M547

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

16.9

148.0

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	14.0	14.0	0.0	535.0	630.0	368.0
Potential Emission in tons/yr	1.04	1.04	0.00	39.6	46.6	27.2

Sound Attenuation Test Cell

M528

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

17.0

148.9

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	10.0	10.0	0.6	2800	116	399
Potential Emission in tons/yr	0.745	0.745	0.045	208	8.64	29.7

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are based on an engine engineering analysis by the applicant.

Emission Factors for the sound attenuation test cell are from FIRES.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Reciprocating Engines

Page 4 of 11 TSD APP A

Company Name: Caterpillar, Inc.
City, Indiana: Lafayette, Indiana
Part 70: T157-7594
Pit ID: 157-00044
Reviewer: CarrieAnn Ortolani
Date: December 12, 1996

Emissions calculated based on heat input capacity (MMBtu/hr)

Twenty-one (21) Engine Test Cells

M501-M520 and M522

Heat Input Capacity Potential Throughput S= = WEIGHT % SULFUR
MM Btu/hr kgals/year

 9986

Emission Factor in lb/kgal	Pollutant					
	PM 33.5	PM10 32	SO2 31.2	NOx 469.0	VOC 32.1	CO 102
Potential Emission in tons/yr	167	160	156	2342	160	509

Packaging Test Cell

M525

Heat Input Capacity Potential Throughput S= = WEIGHT % SULFUR
MM Btu/hr kgals/year

 1270

Emission Factor in lb/kgal	Pollutant					
	PM 33.5	PM10 32	SO2 31.2	NOx 469.0	VOC 32.1	CO 102
Potential Emission in tons/yr	21.3	20.3	19.8	298	20.4	64.8

Dual Fuel Test Stand

M523

Heat Input Capacity Potential Throughput S= = WEIGHT % SULFUR
MM Btu/hr kgals/year

 957

Emission Factor in lb/kgal	Pollutant					
	PM 33.5	PM10 32	SO2 31.2	NOx 469.0	VOC 32.1	CO 102
Potential Emission in tons/yr	16.0	15.3	14.9	224	15.4	48.8

Power Module

M547

Heat Input Capacity Potential Throughput S= = WEIGHT % SULFUR
MM Btu/hr kgals/year

 1057

Emission Factor in lb/kgal	Pollutant					
	PM 33.5	PM10 32	SO2 31.2	NOx 469.0	VOC 32.1	CO 102
Potential Emission in tons/yr	17.7	16.9	16.5	248	17.0	53.9

Peak Shaving

EL45016

Heat Input Capacity Potential Throughput S= = WEIGHT % SULFUR
MM Btu/hr kgals/year

 2015

Emission Factor in lb/kgal	Pollutant					
	PM 33.5	PM10 32	SO2 31.2	NOx 469.0	VOC 32.1	CO 102
Potential Emission in tons/yr	33.7	32.2	31.4	472	32.3	103

Sound Attenuation Test Stand

M528

Heat Input Capacity Potential Throughput S= = WEIGHT % SULFUR
MM Btu/hr kgals/year

 1064

Emission Factor in lb/kgal	Pollutant					
	PM 33.5	PM10 32	SO2 31.2	NOx 469.0	VOC 32.1	CO 102
Potential Emission in tons/yr	17.8	17.0	16.6	249	17.1	54.2

Methodology

Potential Throughput (hp-hr/yr) = hp * 8760 hr/yr

Emission Factors are from AIRS (SCC 2-02-001-02)

1 hp-hr = 7000 Btu, AP42 (Fifth edition, January 1995), Table 3.3-2, Footnote a.

Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)

Emission (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

Company Name: Caterpillar, Inc.
City, Indiana: Lafayette, Indiana
Part 70: T157-7594
Plt ID: 157-00044
Reviewer: CarrieAnn Ortolani
Date: December 12, 1996

HAPs from Reciprocating Engines

diesel fuel

HAP	Emission Factor (lb/MMBtu)	Potential Throughput (MMBtu/hr)	Potential Emissions (lb/hr)	Potential Emissions (tons/yr)
Benzene	0.000933	261.3	0.244	1.07
Toluene	0.000409	261.3	0.107	0.468
Xylenes	0.000285	261.3	0.074	0.326
Propylene	0.000258	261.3	0.067	0.295
1,3-Butadiene	0.000039	261.3	0.010	0.045
Formaldehyde	0.00118	261.3	0.308	1.35
Acetaldehyde	0.000767	261.3	0.200	0.878
Acrolein	0.000093	261.3	0.024	0.106
Naphthalene	0.000085	261.3	0.022	0.097
Total:			4.63	

Natural Gas fired reciprocating engines do not currently have emission factors for HAPs. The diesel fuel emission will be greater.

Methodology

Emission Factors from AP-42 Table 3.3-3

HAPs from the three (3) boilers

Natural Gas fired boilers

HAP	Emission Factor (lb/MMcf)	Potential Throughput (MMcf/hr)	Potential Emissions (lb/hr)	Potential Emissions (tons/yr)
Formaldehyde	0.155	0.2499	0.039	0.170
Toluene	0.0022	0.2499	0.001	0.002
Naphthalene	0.00024	0.2499	0.00006	0.00026
Acrolein	0.000093	0.2499	0.00002	0.00010
Naphthalene	0.000085	0.2499	0.00002	0.00009
Arsenic	0.00023	0.2499	0.00006	0.00025
Chromium	0.0011	0.2499	0.00027	0.00120
Cobalt	0.00012	0.2499	0.00003	0.00013
Lead	0.000271	0.2499	0.00007	0.00030
Manganese	0.000381	0.2499	0.00010	0.00042
Nickel	0.00361	0.2499	0.00090	0.00395
Total:			0.179	

Methodology

Emission Factors from AP-42 updated 10/96 Tables 1.4-4 and 1.4-5

No. 2 fuel oil fired boilers

HAP	Emission Factor (lb/MMBtu)	Potential Throughput (MMBtu/hr)	Potential Emissions (lb/hr)	Potential Emissions (tons/yr)
Formaldehyde	0.000405	249.9	0.101	0.443
Arsenic	4.5E-06	249.9	0.001	0.005
Beryllium	2.5E-06	249.9	0.001	0.003
Cadmium	0.000011	249.9	0.003	0.012
Chromium	0.000067	249.9	0.017	0.073
Lead	8.9E-06	249.9	0.002	0.010
Manganese	0.000014	249.9	0.003	0.015
Mercury	3.0E-06	249.9	0.001	0.003
Nickel	0.00017	249.9	0.042	0.186
Total:			0.751	

Methodology

Emission Factors from AP-42 Tables 1.3-9 and 1.3-11

**Appendix A: Federal Potential Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

**Company Name: Caterpillar, Inc.
Address City IN Zip: Lafayette, Indiana
Part 70: T157-7594
Plt ID: 157-00044
Reviewer: CarrieAnn Ortolani
Date: December 12, 1996**

Material	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Flash-off (fraction)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential tons per year	lb VOC /gal solids	Transfer Efficiency
W-1																	
Urethane Paint	10.92	31.80%	0.0%	31.8%	0.0%	68.20%	0.10300	15.000	1.000	3.47	3.47	5.37	128.76	23.50	12.60	5.09	75%
Solvent	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.10300	15.000	1.000	7.04	7.04	10.88	261.04	47.64	0.00	n/a	75%
W-2																	
Urethane Paint	10.92	31.80%	0.0%	31.8%	0.0%	68.20%	0.24000	1.000	1.000	3.47	3.47	0.83	20.00	3.65	1.96	5.09	75%
Solvent	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.24000	1.000	1.000	7.04	7.04	1.69	40.55	7.40	0.00	n/a	75%
W-3																	
Urethane Paint	10.92	31.80%	0.0%	31.8%	0.0%	68.20%	1.87000	5.000	1.000	3.47	3.47	32.47	779.24	142.21	76.25	5.09	75%
Solvent	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.17969	5.000	1.000	7.04	7.04	6.33	151.80	27.70	0.00	n/a	75%
W-33																	
Urethane Paint	10.92	31.80%	0.0%	31.8%	0.0%	68.20%	0.25000	5.000	1.000	3.47	3.47	4.34	104.18	19.01	10.19	5.09	75%
Solvent	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.03125	5.000	1.000	7.04	7.04	1.10	26.40	4.82	0.00	n/a	75%
Solvent	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.06250	5.000	1.000	7.04	7.04	2.20	52.80	9.64	0.00	n/a	75%
W-3 to be removed																	
Urethane Paint	10.92	31.80%	0.0%	31.8%	0.0%	68.20%	1.42000	1.250	1.000	3.47	3.47	6.16	147.93	27.00	14.48	0.00	75%
Solvent	7.04	100.00%	0.0%	100.0%	0.0%	0.00%	0.12000	1.250	1.000	7.04	7.04	1.06	25.34	4.63	0.00	n/a	75%

State Potential Emissions**Add worst case coating to all solvents**

65.2	1565	286	101
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* Emissions from booth W-3 that will be removed are not counted towards potential since the existing booth W-3 and new booth W-3 will not operate at the same time.

Control Technology Emissions (Combustion)						Emission Factors										
Type	Number	Capacity MMBtu/hr	Gas usage MMCF/yr	PM lb/MMCF	PM10 lb/MMCF	SO2 lb/MMCF	NOx lb/MMCF	VOC lb/MMCF	CO lb/MMCF		PM tons/yr	PM10 tons/yr	Emissions SO2 tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr
Catalytic			0.0	3.0	3.0	0.6	100.0	5.3	35.0		0.0	0.0	0.0	0.0	0.0	0.0
Thermal			0.0	3.0	3.0	0.6	140.0	2.8	20.0		0.0	0.0	0.0	0.0	0.0	0.0
Total			0.0								0.0	0.0	0.0	0.0	0.0	0.0
										Control Efficiency		Controlled	Controlled	Controlled	Controlled	
										VOC	PM	VOC pounds per hour	VOC pounds per day	VOC tons/yr	Particulate tons/yr	
											0.98					

Controlled Emissions due to Surface Coating Operations and Controls

65.2	1565	286	2.02
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METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * Flash-off
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day) * Flash-off
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs) * Flash-off
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids) * Flash-off
Total = Worst Coating + Sum of all solvents used

HAP Emission Calculations

Company Name: Caterpillar, Inc.
Address City IN Zip: Lafayette, Indiana
Part 70: T157-7594
Plt ID: 157-00044
Reviewer: CarrieAnn Ortolani
Date: December 12, 1996

Material	Density (lb/gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Flash-off (fraction)	Weight % Xylene	Weight % Ethyl benzene	Weight % Glycol Ethers		Xylene Emissions (tons/yr)	Ethyl benzene Emissions (tons/yr)	Glycol Ethers Emissions (tons/yr)	Total Emissions (tons/yr)
W-1												
Urethane Paint	10.92	0.10300	15.00000	1.00	10.00%	5.00%	5.00%		7.39	3.69	3.69	14.78
Solvent	7.04	0.10300	15.00000	1.00	5.00%	0.00%	0.00%		2.38	0.00	0.00	2.38
W-2												
Urethane Paint	10.92	0.24000	1.000	1.00	10.00%	5.00%	5.00%		1.15	0.57	0.57	2.30
Solvent	7.04	0.24000	1.000	1.00	5.00%	0.00%	0.00%		0.37	0.00	0.00	0.37
W-3												
Urethane Paint	10.92	1.87000	5.000	1.00	10.00%	5.00%	5.00%		44.72	22.36	22.36	89.44
Solvent	7.04	0.17969	5.000	1.00	5.00%	0.00%	0.00%		1.39	0.00	0.00	1.39
W-33												
Urethane Paint	10.92	0.25000	5.000	1.00	10.00%	5.00%	5.00%		5.98	2.99	2.99	11.96
Solvent	7.04	0.03125	5.000	1.00	5.00%	0.00%	0.00%		0.24	0.00	0.00	0.24
Solvent	7.04	0.06250	5.000	1.00	5.00%	0.00%	0.00%		0.48	0.00	0.00	0.48
W-3 to be removed												
Urethane Paint	10.92	1.42000	1.250	1.00	10.00%	5.00%	5.00%		8.49	4.24	4.24	16.98
Solvent	7.04	0.12000	1.250	1.00	5.00%	0.00%	0.00%		0.23	0.00	0.00	0.23

Total State Potential Emissions

TOTALS:	(tons/yr):	64.1	29.6	29.6	123
	(lb/hr):	14.6	6.76	6.76	28.2
	(g/sec):	1.84	0.852	0.852	3.55

* Emissions from booth W-3 that will be removed are not counted towards potential since the existing booth W-3 and new booth W-3 will not operate at the same time.

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Limited Emissions Calculations
10 < MM BTU/HR <100
Small Industrial Boilers

Page 8 of 11 TSD App A

Company Name: Caterpillar, Inc.
Address, City IN Zip: Lafayette, Indiana
Part 70: T157-7594
Plt ID: 157-00044
Reviewer: CarrieAnn Ortolani
Date: December 12, 1996

Three (3) Boilers
BY24010, BY24011, BY24012

Steam Generation Capacity lbs/hr	Limited Steam Generation lbs/hr	Boiler Usage %
210,000	140,000	66.7%

#2 Fuel Oil

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
167	10424	0.29

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	1.0	41.2 (142.0S)	20.0	0.20	5.0
Potential Emission in tons/yr	10.4	5.21	215	104	1.04	26.1

Natural Gas

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
167	1459

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	14.0	14.0	0.6	140.0	2.8	35.0
Potential Emission in tons/yr	10.2	10.2	0.438	102	2.04	25.5

Methodology

Equivalency of steam generated and percent boiler usage to generate that steam.

Heat input = Potential heat input capacity (MMBtu/hr) * percent boiler usage.

Natural Gas

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 140, Low NOx Burner = 81, Flue gas recirculation = 30

Emission Factors for CO: Uncontrolled = 35, Low NOx Burner = 61, Flue gas recirculation = 37

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

#2 Fuel Oil

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-2 and 1.3-4 (SCC 1-02-005-01/02/03)

Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

**Appendix A: Equivalency Determination
Fuel Usage Limitations**

Page 9 of 11 TSD App A

Company Name: Caterpillar, Inc.
Address City IN Zip: Lafayette, Indiana
Part 70: T157-7594
Plt ID: 157-00044
Reviewer: CarrieAnn Ortolani
Date: December 12, 1996

Equivalencies

Emission Unit	fuel	equivalency of 1 unit to kilogallons	equivalent throughput (unit indicated)	NOx factor (lb/unit)	emissions (tons/yr)
test cells (M501-M520, M522)	diesel	1	1062 kilogallons	469	249
test cells (M501-M520)	nat. gas	6.81	156 MMcf	3196	249
test cell (M522)	nat. gas	0.640	1660 MMcf	300	249
one (1) packaging test cell	diesel	1	166 kilogallons	469	39
one (1) packaging test cell	nat. gas	0.640	260 MMcf	300	39
one (1) power module	diesel	1	166 kilogallons	469	39
one (1) power module	nat. gas	1.14	146 MMcf	535	39
one (1) dual fuel test stand	diesel	1	166 kilogallons	469	39
one (1) dual fuel test stand	nat. gas	0.640	260 MMcf	300	39
one (1) peak shaving generator	diesel	1	166 kilogallons	469	39
one (1) sound attenuation test cell	diesel	1	166 kilogallons	469	39
one (1) sound attenuation test cell	nat. gas	5.97	27.9 MMcf	2800	39

Emission Unit	fuel	equivalency of 1 unit to MMcf	equivalent throughput (unit indicated)	VOC factor (lb/unit)	emissions (tons/yr)
one (1) power module	nat. gas	1	76.1 MMcf	630	24
one (1) power module	diesel	0.051	1495 kilogallons	32.1	24

Methodology

equivalent throughput (units/yr) = emission limitation (tons/yr) * 2,000 lbs/ton / emission factor (lb/unit)
equivalency of 1 unit to limiting unit = limiting throughput / throughput of that unit

**Appendix A: Limited Emissions Calculations
Natural Gas Combustion Only
Reciprocating Engines
Lesser of Potential and Limited Throughputs**

Page 10 of 11 TSD App A

Company Name: Caterpillar, Inc.
Address City IN Zip: Lafayette, Indiana
Part 70: T157-7594
Plt ID: 157-00044
Reviewer: CarrieAnn Ortolani
Date: December 12, 1996

Twenty (20) Engine Test Cells

M501-M520

Heat Input Capacity
MMBtu/hr

Limited Throughput
MMCF/yr

122.0

156

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	24.4	24.4	0.0	3196.0	572.0	2022.0
Potential Emission in tons/yr	1.90	1.90	0.00	249	44.6	158

One (1) Engine Test Cell

M522

Heat Input Capacity
MMBtu/hr

Limited Throughput*
MMCF/yr

6.1

0.0

* Throughput of zero to account for worst cas of all natural gas used by M501-M520.

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	14.0	14.0	0.0	300.0	239.0	576.0
Potential Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00

Packaging Test Cell

M525

Heat Input Capacity
MMBtu/hr

Limited Throughput
MMCF/yr

13.7

120

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	14.0	14.0	0.0	300.0	239.0	576.0
Potential Emission in tons/yr	0.840	0.840	0.00	18.0	14.3	34.6

Dual Fuel Test Stand

M523

Heat Input Capacity
MMBtu/hr

Limited Throughput
MMCF/yr

11.0

96.4

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	14.0	14.0	0.0	300.0	239.0	576.0
Potential Emission in tons/yr	0.675	0.675	0.00	14.5	11.5	27.8

Power Module

M547

Heat Input Capacity
MMBtu/hr

Limited Throughput
MMCF/yr

16.9

76.1

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	14.0	14.0	0.0	535.0	630.0	368.0
Potential Emission in tons/yr	0.533	0.533	0.00	20.4	24.0	14.0

Sound Attenuation Test Cell

M528

Heat Input Capacity
MMBtu/hr

Limited Throughput
MMCF/yr

17.0

27.9

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	10.0	10.0	0.6	2800	116	399
Potential Emission in tons/yr	0.140	0.140	0.008	39.1	1.62	5.57

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are based on an engine engineering analysis by the applicant.

Emission Factors for the sound attenuation test cell are from FIRES.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Reciprocating Engines

Page 11 of 11 TSD APP A

Company Name: Caterpillar, Inc.
City, Indiana: Lafayette, Indiana
Part 70: T157-7594
Pit ID: 157-00044
Reviewer: CarrieAnn Ortolani
Date: December 12, 1996

Emissions calculated based on heat input capacity (MMBtu/hr)

Twenty-one (21) Engine Test Cells

M501-M520 and M522

Heat Input Capacity Limited Throughput S= = WEIGHT % SULFUR
MM Btu/hr kgals/year

 1062

Emission Factor in lb/kgal	Pollutant					
	PM 33.5	PM10 32	SO2 31.2	NOx 469.0	VOC 32.1	CO 102
Potential Emission in tons/yr	17.8	17.0	16.6	249	17.0	54.2

Packaging Test Cell

M525

Heat Input Capacity Limited Throughput S= = WEIGHT % SULFUR
MM Btu/hr kgals/year

 166

Emission Factor in lb/kgal	Pollutant					
	PM 33.5	PM10 32	SO2 31.2	NOx 469.0	VOC 32.1	CO 102
Potential Emission in tons/yr	2.78	2.66	2.59	38.9	2.66	8.47

Dual Fuel Test Stand

page11

M523

Heat Input Capacity Limited Throughput S= = WEIGHT % SULFUR
MM Btu/hr kgals/year

 166

Emission Factor in lb/kgal	Pollutant					
	PM 33.5	PM10 32	SO2 31.2	NOx 469.0	VOC 32.1	CO 102
Potential Emission in tons/yr	2.78	2.66	2.59	38.9	2.66	8.47

Power Module

M547

Heat Input Capacity Limited Throughput S= = WEIGHT % SULFUR
MM Btu/hr kgals/year

 166

Emission Factor in lb/kgal	Pollutant					
	PM 33.5	PM10 32	SO2 31.2	NOx 469.0	VOC 32.1	CO 102
Potential Emission in tons/yr	2.78	2.66	2.59	38.9	2.66	8.47

Peak Shaving

EL45016

Heat Input Capacity Limited Throughput S= = WEIGHT % SULFUR
MM Btu/hr kgals/year

 166

Emission Factor in lb/kgal	Pollutant					
	PM 33.5	PM10 32	SO2 31.2	NOx 469.0	VOC 32.1	CO 102
Potential Emission in tons/yr	2.78	2.66	2.59	38.9	2.66	8.47

Sound Attenuation Test Stand

M528

Heat Input Capacity Limited Throughput S= = WEIGHT % SULFUR
MM Btu/hr kgals/year

 166

Emission Factor in lb/kgal	Pollutant					
	PM 33.5	PM10 32	SO2 31.2	NOx 469.0	VOC 32.1	CO 102
Potential Emission in tons/yr	2.78	2.66	2.59	38.9	2.66	8.47

Methodology

Potential Throughput (hp-hr/yr) = hp * 8760 hr/yr

Emission Factors are from AIRS (SCC 2-02-001-02)

1 hp-hr = 7000 Btu, AP42 (Fifth edition, January 1995), Table 3.3-2, Footnote a.

Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)

Emission (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)